

Originally Processed With FOIA(s):
1998-0004-F[2]

FOIA Number:
S

FOIA MARKER

**This is not a textual record. This is used as an
administrative marker by the George Bush Presidential
Library Staff.**

Record Group/Collection:	George H.W. Bush Presidential Records
Collection/Office of Origin:	Chief of Staff, White House Office of
Series:	Sununu, John, Files
Subseries:	Issues Files

OA/ID Number:	29160
Folder ID Number:	29160-005

Folder Title:
Health Care 1991 [5]

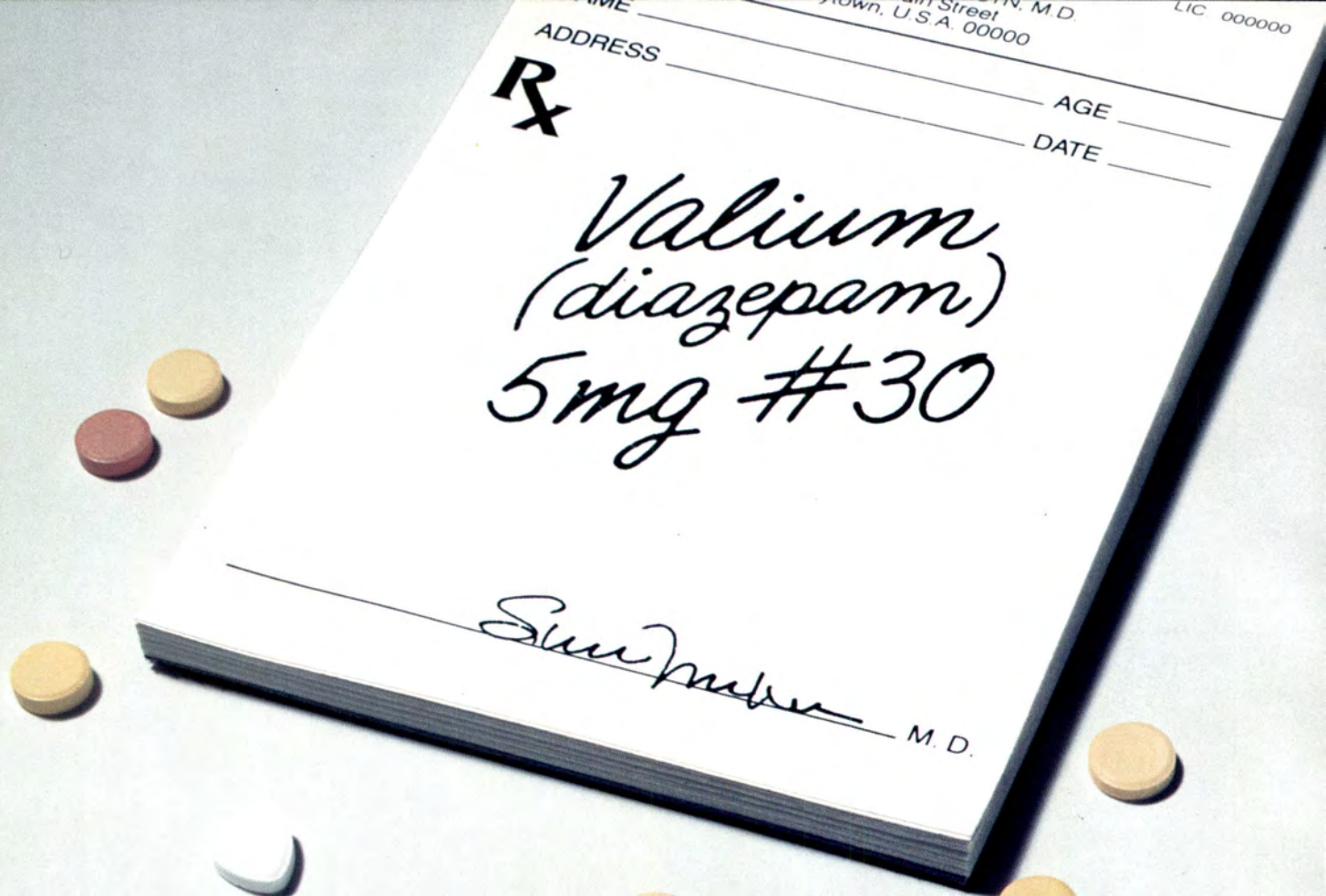
Stack:	Row:	Section:	Shelf:	Position:
G	15	25	2	5

JAMA[®]

The Journal of the American Medical Association

May 15, 1991





Your R_x may be open to 17 interpretations*...

TEL. 000-0000

STMFRD G. MNDLSTN, M.D.
10 Main Street
Anytown, U.S.A. 00000

LIC 000000

NAME _____

ADDRESS _____

AGE _____

DATE _____

Rx

*Valium
5mg #30*

Do not substitute

Steve Miller

M. D.



unless you settle the issue.

VALIUM[®]
brand of
diazepam/Roche [®]



The final choice should really be yours

The cut out "V" design is a registered trademark of Roche Products Inc.
Copyright © 1991 by Roche Products Inc. All rights reserved.

A continuing commitment to cardiology

1960's
Xylocaine®

1970's
metoprolol

1980's
tocainide

1990's
The commitment
continues...

For over 30 years, Astra advances have resulted in products that have become trusted standards in the field of cardiology.

Today, our commitment to developing new and better therapies for cardiac patients continues.

Metoprolol

Soon to be even better.

ANTRA®

The originators of metoprolol



The Kodak DT60 analyzer delivers hospital-proven chemistry results on the spot, in minutes. It's the kind of service your patients expect.

Now you can perform tests in your office, while patients are still there, with the accuracy and consistency enjoyed by hospital laboratories using Kodak Ektachem analyzers. The kind of efficient, worry-free healthcare service your patients expect. The Kodak Ektachem DT60 analyzer comes with a menu of over 27 chemistries, including complete lipid profiles with micro HDL, all on a fingerstick. All done with dry reagents, eliminating hidden operating costs. Desktop in size and modest in cost, DT60 analyzers come with the best service in the business. We've even designed them to help you comply with anticipated federal regulations governing in-office quality control practices.

For details, talk to a Kodak representative, or call 1 800 445-6325, Ext. 480.

YOUR PATIENTS ARE IMPATIENT! CALL KODAK

Clinical Products



JAMA

The Journal of the American Medical Association
107 Years of Continuous Publication

All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the official policy of the American Medical Association or the institution with which the author is affiliated, unless this is clearly specified.

Editor: George D. Lundberg, MD

Deputy Editor: Richard M. Glass, MD

Deputy Editor (West): Drummond Rennie, MD

Senior Editors: Helene M. Cole, MD, Don Riesenber, MD

Senior Contributing Editors: Bruce B. Dan, MD, M. Therese Southgate, MD

Contributing Editors: Charles B. Clayman, MD, David S. Cooper, MD, Harriet S. Meyer, MD, Carin M. Olson, MD, Jeanette M. Smith, MD, Jody W. Zyke, MD

Consulting Editor: Roger C. Bone, MD

Statistical Editor: Naomi Vaisrub, PhD

Assistant to the Editor: Annette Flanagan

Medical News—Editor: Phil Gunby; **Associate Editors:** Paul Cotton, Marsha F. Goldsmith, Charles Marwick (Washington, DC), Teri Randall, Andrew Skolnick

Associate Editors: Charlene Breedlove, Roxanne K. Young

Special Assignments Editor: Dennis L. Breo

Editorial Services Manager: Elaine Williams

Production Manager: M. Kathleen Berka

Electronic Manager: Mary C. Steermann

Editorial Processing Manager: Cheryl Iverson

Assistant Editorial Processing Manager: Paula Glitman Stone

Staff Assistants: Diane Darnell, Bonnie Van Clevon

Electronic Coordinator: Mary Ellen Johnston

Production Supervisors: Barbara Clark (Proofreading), Betty Frigerio (Production), Thomas J. Handrigan (Illustrations), JoAnne Weiskopf (Layout)

Copy Editing: Vickie Golden (Free-lance Coordinator), Paul Frank (Senior Copy Editor), Susan R. Benner, Susan L. McIlwaine, Richard T. Porter, Anne Schmidt Ryan, Jennifer Sperry

Proofreading: Gwen Gilberg, Margaret Johnson, Teresa H. Omitek, Jennifer Reiling

Production Associate: Melinda Arcabos

Senior Production Assistants: Karen Branham, Brenda Chandler, Anita Henderson, Marci A. Kayne, Debra Lucas, Sharon Lynch, Christine Metzler, Debbie Pogorzelski, E. Ruth White, Lynn Yuill

Production Assistants: Laslo Hunyadi, Dorothy Patterson, Sandra Sanders, JoAnne Turner

Illustrations and Layout: Leslie Koch, Juliana K. Mills, Linda Schmitt

Cover Editor: M. Therese Southgate, MD

Editorial Coordinator: Lenette Williams

Editorial Supervisors: Steve Sarang, Gale Saulsberry

Editorial Assistants: Mary Cannon, Kimberly Evans, Anne Frecka, Helen M. Giese, Shirley Goines, Sharon Iverson, Patricia Joworski, Andrea Kanter, Mary Ann Lilly, Ethel Pinkston, Dan Reyes, Dorothy White, Helga Wutz

Electronic Input Specialist: Vee Bailey

Scientific and Socioeconomic Indexing Department: Norman Frankel (Director), George Kruto, Susan McClelland, Mary Kay Tinerella

JAMA, The Journal of the American Medical Association (ISSN 0098-7484), is published four issues per month by the American Medical Association, 515 N State St, Chicago, IL 60610. Phone (312) 464-5000. Cable address "Medic" Chicago.

SUBSCRIPTION RATES—The subscription rate per year is \$20, which is included in the annual AMA membership dues. Nonmembers are charged a higher than basic rate of \$79 for 1 year, \$143 for 2 years in the United States and US possessions; in all other countries, 1 year \$99; 2 years \$183 (add \$40 surcharge to each 1-year subscription and \$80 surcharge to each 2-year subscription for air delivery available to most countries). Medical students and residents are also charged a higher than basic rate of \$39.50 for 1 year, \$71.50 for 2 years in the United States and US possessions. Rates for subscriptions for delivery to Japan or South Korea are available through respective exclusive agents. Address all subscription communications to American Medical Association, Circulation Division, 515 N State St, Chicago, IL 60610. Phone: (312) 670-SUBS.

CHANGE OF ADDRESS—POSTMASTER, send all address changes to JAMA, The Journal of the American Medical Association, attention: Subscription Department, 515 N State St, Chicago, IL 60610. Notification of address change must be made at least 6 weeks in advance; include both old and new addresses, a recent mailing label, and your new ZIP code.

Second-class postage paid at Chicago and additional mailing office.

JAMA® Registered in the US Patent and Trademark Office.

Copyright © 1991 by the

American Medical Association



May 15, 1991, Vol 265, No. 19

To promote the science and art of medicine and the betterment of the public health.

Caring for the Uninsured and Underinsured

The Uninsured: From Dilemma to Crisis 2491

E. Friedman, Chicago, Ill

Health Insurance Values and Implementation in the Netherlands and the Federal Republic of Germany: An Alternative Path to Universal Coverage 2496

B. L. Kirkman-Liff, Tempe, Ariz

Health Access America—Strengthening the US Health Care System 2503

J. S. Todd, S. V. Seekins, J. A. Krichbaum, L. K. Harvey, Chicago, Ill

A Call for Action: The Pepper Commission's Blueprint for Health Care Reform 2507

J. D. Rockefeller IV, Washington, DC

The Physicians Who Care Plan: Preserving Quality and Equitability in American Medicine 2511

R. S. Bronow, R. A. Beltran, S. C. Cohen, P. T. Elliott,

G. M. Goldman, S. G. Spotnitz, San Antonio, Tex

Restructuring Health Care in the United States 2516

D. O. Nutter, Chicago, Ill; C. M. Helms, Iowa City, Iowa;

M. E. Whitcomb, Seattle, Wash; W. D. Weston, East Lansing, Mich

Expanding Medicare and Employer Plans to Achieve Universal Health Insurance 2525

K. Davis, Baltimore, Md

A Framework for Reform of the US Health Care Financing and Provision System 2529

The Kansas Employer Coalition on Health,

Task Force on Long-term Solutions, Topeka, Kan

Universal Health Insurance Through Incentives Reform 2532

A. C. Enthoven, Stanford, Calif; R. Kronick, San Diego, Calif

An American Approach to Health System Reform 2537

J. Holahan, M. Moon, W. P. Welch, S. Zuckerman, Washington, DC

A Tax Reform Strategy to Deal With the Uninsured 2541

S. M. Butler, Washington, DC

The 'USHealth Act': Comprehensive Reform for a Caring America 2545

E. R. Roybal, Washington, DC

Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal 2549

K. Grumbach, T. Bodenheimer, D. U. Himmelstein,

S. Woolhandler, Cambridge, Mass

The Health Security Partnership: A Federal-State Universal Insurance and Cost-Containment Program 2555

R. Fein, Boston, Mass

Beyond Universal Health Insurance to Effective Health Care 2559

E. Ginzberg, M. Ostow, New York, NY

Editorials

Caring for the Uninsured: Choices for Reform 2563

R. J. Blendon, J. N. Edwards, Boston, Mass

National Health Care Reform: An Aura of Inevitability Is Upon Us 2566

G. D. Lundberg, Chicago, Ill

The Cover 2445

Jamie Wyeth, *Kalounna in Frogtown*, M. T. Southgate, Chicago, Ill

Medical News & Perspectives 2451

Preexisting Conditions 'Hold Americans Hostage' to Employers and Insurance . . .
Should Insurance Cover Routine Immunizations? . . . Groups Survey Health
Care Costs, Charges . . . School-Based Health Clinics Provide Essential Care

From the Health Care Financing Administration 2461

From the Health Resources and Services Administration 2464

Abstracts 2469

Letters 2480

Caring for the Uninsured and Underinsured A. O. Goldstein, L. Enyedi, M. Calderon,
J. Babb, S. Bennett, G. H. Holman, E. S. Medley, T. J. Moore, H. J. Geiger, R. Zufall,
S. Helig, D. Wlodarczyk, B. Harris, D. G. Spigos, B. G. Langer, M. Frenkel, A. R. Barnosky, B. L. Farkas

The Oath of the Healer L. Weinstein

At Large With Dennis L. Breo 2573

HHS Secretary Louis Sullivan speaks out for improved health

Obituary 2581

Nicholas Edward Davies

Books 2588

Medicine and Money (Marsh and Yarborough) Reviewed by R. M. Veatch

Out of Bedlam (Johnson) . . . **Madness in the Streets** (Isaac and Armat) Reviewed by C. C. Bell

Medical Technology and Society (Bronzino, Smith, and Wade) Reviewed by J. M. Humber

Borderline Medicine (Weisberg) Reviewed by O. W. Anderson

What Kind of Life (Callahan) Reviewed by S. J. Reiser

Obituary Listing 2600

CME Forum 2605

Classified Advertising 2609

JAMA Journal Club Reading Assignments 2624

Index to Advertisers 2624

Reference Directories

AMA Officials, April 3; US Meetings, May 1; Organizations of Medical Interest, January 9;
State Associations and Examinations and Licensure, January 16; Meetings Outside the
United States, January 23/30

Instructions for Authors See January 2, 1991, p 49.

JAMA[®]

The Journal of the American Medical Association

EDITORIAL BOARD

Kenneth A. Arndt, MD, Boston, Mass
Byron J. Bailey, MD, Galveston, Tex
Robert J. Blendon, ScD, Boston, Mass
James E. Dalen, MD, Tucson, Ariz
Lois DeBaakey, PhD, Houston, Tex
R. Gordon Douglas, Jr, MD, New York, NY
Ronald G. Evens, MD, St Louis, Mo
William H. Foege, MD, Atlanta, Ga
Renee C. Fox, PhD, Philadelphia, Pa
Daniel X. Freedman, MD, Los Angeles, Calif
Vincent A. Fulginiti, MD, New Orleans, La
Morton F. Goldberg, MD, Baltimore, Md
Marilyn Heins, MD, Tucson, Ariz
King K. Holmes, MD, PhD, Seattle, Wash
Robert J. Joynt, MD, PhD, Rochester, NY
Gordon K. MacLeod, MD, Pittsburgh, Pa
William W. McLendon, MD, Chapel Hill, NC
Arno G. Motulsky, MD, Seattle, Wash
Claude H. Organ, Jr, MD, Oakland, Calif
Edmund D. Pellegrino, MD, Washington, DC
Robert E. Rakel, MD, Houston, Tex
David J. Shulkin, MD, Philadelphia, Pa
Thomas P. Stossel, MD, Boston, Mass
Anne Colston Wentz, MD, Chicago, Ill

INTERNATIONAL ADVISORY COMMITTEE

Prof Luigi Allegra, JAMA-Italy
Basel Atallah, MD, JAMA-Middle East
Michèle Dekker, MD, JAMA-France
Yuichiro Goto, MD, JAMA-Japan
Dr Ragini Jain, JAMA-India
Ivan Lambic, MD, JAMA-Yugoslavia
Yong Kak Lee, MD, JAMA-Korea
Dr Mehmet Pekus, JAMA-Turkey
Azam Soorma, MBBS, JAMA-Pakistan
Prof David Todd, JAMA-Southeast Asia
Zhang Hongkai, MD, JAMA-China
Ryszard Zochowski, MD, JAMA-Poland

AMA Officers

President: C. John Tupper, MD*
President-Elect: John J. Ring, MD*
Immediate Past President: Alan R. Nelson, MD
Secretary-Treasurer: Jerald R. Schenken, MD*
Speaker, House of Delegates: John L. Clowe, MD
Vice-Speaker, House of Delegates: Daniel H. Johnson, Jr, MD

AMA Trustees

Lonnie R. Bristow, MD*; Rufus K. Broadaway, MD; Mary Ann
Contogiannis, MD (Resident); Nancy W. Dickey, MD; Palma E.
Formica, MD; William E. Jacott, MD; Audrey J. Ludwig (Student);
Robert E. McAfee, MD* (Vice-Chairman); Joseph T. Painter, MD*
(Chairman); Thomas R. Reardon, MD; Raymond Scalettar, MD*
(Chairman); Jerald R. Schenken, MD* (Secretary); P. John Seward, MD; Frank
B. Walker, MD

*Executive Committee

Executive Vice President: James S. Todd, MD
Deputy Executive Vice President: Kenneth E. Monroe
Senior Vice President: Larry E. Joyce
Vice President, Publishing: Robert L. Kennett
Editor-in-Chief, Scientific Publications: George D. Lundberg,
MD
Director, Publication Production and Printing Division:
Nawin Gupta, PhD
Director, Advertising Sales and Promotion Services
Division: Dennis Joseph Dennehy
Director, Advertising Services: Raymond Christian
Director, Circulation Department: Beverly Martin
Director, Fulfillment Department: Ray Healy

ADVERTISING OFFICES: Eastern: 600 Third Ave, Suite 3700,
New York, NY 10016 (Representatives: Alice Harvey-Herman,
Cliff Vanderhoof [212-867-6640]); Midwest/Farwest: 515 N State
St, Chicago, IL 60610 (Manager: Thomas J. Carroll [312-464-
2472] Representative: Daniel T. Mjolsness); Classified Adver-
tising: Michele Hanrahan (312-464-2456)

ADVERTISING PRINCIPLES—Advertisements in this issue have
been reviewed to comply with the principles governing advertis-
ing in AMA publications. A copy of these principles is available
on request. The appearance of advertising in AMA publications
is not an AMA guarantee or endorsement of the product or the
claims made for the product by the manufacturer.



Early in heart failure treatment

**When ankles ask
for diuresis...
the heart is calling
for CAPOTEN*.**

CAPOTEN complements diuretics and digitalis by reducing afterload *and* preload — improves cardiac output and left ventricular function.¹⁻³

*CAPOTEN is indicated in patients with heart failure who have not responded adequately to treatment with diuretics and digitalis. CAPOTEN should generally be added to both of these agents except when digitalis use is poorly tolerated or otherwise not feasible. In using CAPOTEN, consideration should be given to the risk of neutropenia/agranulocytosis. Use special precautions in patients with impaired renal function, collagen vascular disorders, or those exposed to other drugs known to affect the white blood cells or immune response. Evaluation of heart failure patients should always include assessment of renal function. Please see INDICATIONS AND USAGE, CONTRAINDICATIONS, WARNINGS, PRECAUTIONS, and ADVERSE REACTIONS in the brief summary on the adjacent page.

Include



CAPOTEN[®]
(captopril tablets)

Relief for the failing heart.

References: 1. Captopril Multicenter Research Group: A placebo-controlled trial of captopril in refractory chronic congestive heart failure. *JACC* 2:755-763, 1983. 2. The Captopril-Digoxin Multicenter Research Group: Comparative effects of therapy with captopril and digoxin in patients with mild to moderate heart failure. *JAMA* 259:538-544, 1988. 3. Packer M, Lee WH, Yusuf M, et al: Comparison of captopril and enalapril in patients with severe chronic heart failure. *N Engl J Med* 315:847-853, 1986.

CAPOTEN® TABLETS

Captopril Tablets

INDICATIONS: Hypertension—CAPOTEN (captopril) is indicated for the treatment of hypertension. Consideration should be given to the risk of neutropenia/agranulocytosis (see WARNINGS). CAPOTEN is effective alone and in combination with other antihypertensive agents, especially thiazide-type diuretics.

Heart Failure: CAPOTEN (captopril) is indicated in the treatment of congestive heart failure in patients who have not responded adequately to treatment with diuretics and digitalis. CAPOTEN should generally be added to both of these agents except when digitalis use is poorly tolerated or otherwise not feasible.

CONTRAINDICATIONS: CAPOTEN is contraindicated in patients who are hypersensitive to this product or any other angiotensin-converting enzyme inhibitor (e.g., a patient who has experienced angioedema during therapy with any other ACE inhibitor).

WARNINGS: Angioedema: Angioedema involving the extremities, face, lips, mucous membranes, tongue, glottis or larynx has been seen in patients treated with ACE inhibitors, including captopril. If angioedema involves the tongue, glottis or larynx, airway obstruction may occur and be fatal. Emergency therapy, including but not necessarily limited to, subcutaneous administration of a 1:1000 solution of epinephrine should be promptly instituted.

Neutropenia/Agranulocytosis: Neutropenia ($<1000/\text{mm}^3$) with myeloid hypoplasia has resulted from use of captopril. About half of the neutropenic patients developed systemic or oral cavity infections or other features of the syndrome of agranulocytosis. The risk of neutropenia is dependent on the clinical status of the patient:

In clinical trials in patients with hypertension who have normal renal function (serum creatinine less than 1.6 mg/dL and no collagen vascular disease), neutropenia has been seen in one patient out of over 8,600 exposed. In patients with some degree of renal failure (serum creatinine at least 1.6 mg/dL but no collagen vascular disease), the risk in clinical trials was about 1 per 500. Doses were relatively high in these patients, particularly in view of their diminished renal function. In patients with collagen vascular diseases (e.g., systemic lupus erythematosus, scleroderma) and impaired renal function, neutropenia occurred in 3.7% of patients in clinical trials. While none of the over 750 patients in formal clinical trials of heart failure developed neutropenia, it has occurred during the subsequent clinical experience. Of reported cases, about half had serum creatinine ≥ 1.6 mg/dL and more than 75% received procainamide. In heart failure, it appears that the same risk factors for neutropenia are present.

Neutropenia has appeared usually within 3 months after starting therapy, associated with myeloid hypoplasia and frequently accompanied by erythroid hypoplasia and decreased numbers of megakaryocytes (e.g., hypoplastic bone marrow and pancytopenia); anemia and thrombocytopenia were sometimes seen. Neutrophils generally returned to normal in about 2 weeks after captopril was discontinued, and serious infections were limited to clinically complex patients. About 13% of the cases of neutropenia have ended fatally, but almost all fatalities were in patients with serious illness, having collagen vascular disease, renal failure, heart failure or immunosuppressant therapy, or a combination of these complicating factors. **Evaluation of the hypertensive or heart failure patient should always include assessment of renal function.** If captopril is used in patients with impaired renal function, white blood cell and differential counts should be evaluated prior to starting treatment and at approximately 2-week intervals for about 3 months, then periodically. In patients with collagen vascular disease or who are exposed to other drugs known to affect the white cells or immune response, particularly when there is impaired renal function, captopril should be used only after an assessment of benefit and risk, and then with caution. All patients treated with captopril should be told to report any signs of infection (e.g., sore throat, fever). If infection is suspected, perform white cell counts without delay. Since discontinuation of captopril and other drugs has generally led to prompt return of the white count to normal, upon confirmation of neutropenia (neutrophil count $<1000/\text{mm}^3$) withdraw captopril and closely follow the patient's course.

Proteinuria: Total urinary proteins >1 g per day were seen in about 0.7% of patients on captopril. About 90% of affected patients had evidence of prior renal disease or received high doses (>150 mg/day), or both. The nephrotic syndrome occurred in about one-fifth of proteinuric patients. In most cases, proteinuria subsided or cleared within 6 months whether or not captopril was continued. The BUN and creatinine were seldom altered in proteinuric patients. Since most cases of proteinuria occurred by the 8th month of therapy with captopril, patients with prior renal disease or those receiving captopril at doses >150 mg per day, should have urinary protein estimates (dipstick on 1st morning urine) before therapy, and periodically thereafter.

Hypotension: Excessive hypotension was rarely seen in hypertensive patients but is a possible consequence of captopril use in salt/volume depleted persons (such as those treated vigorously with diuretics), patients with heart failure or those patients undergoing renal dialysis. (See PRECAUTIONS [Drug Interactions].) In heart failure, where the blood pressure was either normal or low, transient decreases in mean blood pressure $>20\%$ were recorded in about half of the patients. This transient hypotension is more likely to occur after any of the first several doses and is usually well tolerated, although rarely it has been associated with arrhythmia or conduction defects. A starting dose of 6.25 or 12.5 mg may minimize the hypotensive effect. Patients should be followed closely for the first 2 weeks of treatment and whenever the dose of captopril and/or diuretic is increased.

BECAUSE OF THE POTENTIAL FALL IN BLOOD PRESSURE IN THESE PATIENTS, THERAPY SHOULD BE STARTED UNDER VERY CLOSE MEDICAL SUPERVISION.

PRECAUTIONS: General: Impaired Renal Function—Hypertension—Some hypertensive patients with renal disease, particularly those with severe renal artery stenosis, have developed increases in BUN and serum creatinine. It may be necessary to reduce captopril dosage and/or discontinue diuretic. For some of these patients, normalization of blood pressure and maintenance of adequate renal perfusion may not be possible. Heart Failure—About 20% of patients develop stable elevations of BUN and serum creatinine $>20\%$ above normal or baseline upon long-term treatment. Less than 5% of patients, generally with severe pre-existing renal disease, required discontinuation due to progressively increasing creatinine. See DOSAGE AND ADMINISTRATION, ADVERSE REACTIONS [Altered Laboratory Findings]. **Hyperkalemia:** Elevations in serum potassium have been observed in some patients treated with ACE inhibitors, including captopril. When treated with ACE inhibitors, patients at risk for the development of hyperkalemia include those with: renal insufficiency; diabetes mellitus; and those using concomitant potassium-sparing diuretics, potassium supplements or potassium-containing salt substitutes; or other drugs associated with increases in serum potassium. (See PRECAUTIONS: Drug Interactions; ADVERSE REACTIONS: Altered Laboratory Findings.) **Valvular Stenosis:** A theoretical concern, for risk of decreased coronary perfusion, has been noted regarding vasodilator treatment in patients with aortic stenosis due to decreased afterload reduction. **Surgery/Anesthesia:** If hypotension occurs during surgery or anesthesia, and is considered due to the effects of captopril, it is correctable by volume expansion.

Drug Interactions: Hypotension—Patients on Diuretic Therapy: Precipitous reduction of blood pressure may occasionally occur within the 1st hour after administration of the initial captopril dose in patients on diuretics, especially those recently placed on diuretics, and those on severe dietary salt restriction or dialysis. This possibility can be minimized by either discontinuing the diuretic or increasing the salt intake about 1 week prior to initiation of captopril therapy or by initiating therapy with small doses (6.25 or 12.5 mg). Alternatively, provide medical supervision for at least 1 hour after the initial dose.

Agents Having Vasodilator Activity: In heart failure patients, vasodilators should be administered with caution. **Agents Causing Renin Release:** Captopril's effect will be augmented by antihypertensive agents that cause renin release.

Agents Affecting Sympathetic Activity: The sympathetic nervous system may be especially important in supporting blood pressure in patients receiving captopril alone or with diuretics. Beta-adrenergic blocking drugs add some further antihypertensive effect to captopril, but the overall response is less than additive. Therefore, use agents affecting sympathetic activity (e.g., ganglionic blocking agents or adrenergic neuron blocking agents) with caution.

Agents Increasing Serum Potassium: Give potassium-sparing diuretics or potassium supplements only for documented hypokalemia, and then with caution, since they may lead to a significant increase of serum potassium. Use potassium-containing salt substitutes with caution.

Inhibitors of Endogenous Prostaglandin Synthesis: Indomethacin and other nonsteroidal anti-inflammatory agents may reduce the antihypertensive effect of captopril, especially in low renin hypertension.

Lithium: Increased serum lithium levels and symptoms of lithium toxicity have been reported in patients receiving concomitant lithium and ACE inhibitor therapy. These drugs should be coadministered with caution and frequent monitoring of serum lithium levels is recommended. If a diuretic is also used, it may increase the risk of lithium toxicity.

Drug/Laboratory Test Interaction: Captopril may cause a false-positive urine test for acetone.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Two-year studies with doses of 50 to 1350 mg/kg/day in mice and rats failed to show any evidence of carcinogenic potential. Studies in rats have revealed no impairment of fertility.

Pregnancy: Category C: Embryocidal effects and craniofacial malformations were observed in rabbits. **Human Experience:** There are no adequate and well-controlled studies of captopril in pregnant women. Data are available that show captopril crosses the human placenta. Captopril should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Based on post-marketing experience with all ACE inhibitors, the following information has been collected. Inadvertent exposure limited to the first trimester of pregnancy does not appear to affect fetal outcome adversely. Fetal exposure during the second and third trimester of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors but it is not clear whether they are related to ACE inhibition, maternal hypertension or the underlying prematurity.

There is no experience with exchange transfusion, hemodialysis or peritoneal dialysis for removing captopril from the neonatal circulation.

Nursing Mothers: Concentrations of captopril in human milk are approximately one percent of those in maternal blood. Because of the potential for serious adverse reactions in nursing infants from captopril, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of CAPOTEN to the mother. (See PRECAUTIONS: Pediatric Use.)

Pediatric Use: Safety and effectiveness in children have not been established. There is limited experience reported in the literature with the use of captopril in the pediatric population; dosage, on a weight basis, was generally reported to be comparable to or less than that used in adults.

Infants, especially newborns, may be more susceptible to the adverse hemodynamic effects of captopril. Excessive, prolonged and unpredictable decreases in blood pressure and associated complications, including oliguria and seizures, have been reported.

CAPOTEN (captopril) should be used in children only if other measures for controlling blood pressure have not been effective.

ADVERSE REACTIONS: Reported incidences are based on clinical trials involving approximately 7000 patients.

Renal: About 1 of 100 patients developed proteinuria (see WARNINGS). Renal insufficiency, renal failure, nephrotic syndrome, polyuria, oliguria, and urinary frequency in 1 to 2 of 1000 patients.

Hematologic: Neutropenia/agranulocytosis has occurred (see WARNINGS). Anemia, thrombocytopenia, and pancytopenia have been reported.

Dermatologic: Rash, (usually maculopapular, rarely urticarial), often with pruritus, and sometimes with fever and eosinophilia, in about 4 to 7 of 100 patients (depending on renal status and dose), usually during the 1st 4 weeks of therapy. Pruritus, without rash, in about 2 of 100 patients. A reversible associated pemphigoid-like lesion, and photosensitivity, have also been reported. Flushing or pallor in 2 to 5 of 1000 patients.

Cardiovascular: Hypotension may occur; see WARNINGS and PRECAUTIONS [Drug Interactions] for discussion of hypotension with captopril therapy. Tachycardia, chest pain, and palpitations each in about 1 of 100 patients. Angina pectoris, myocardial infarction, Raynaud's syndrome, and congestive heart failure each in 2 to 3 of 1000 patients.

Dysgeusia: Approximately 2 to 4 (depending on renal status and dose) of 100 patients developed a diminution or loss of taste perception; taste impairment is reversible and usually self-limited even with continued drug use (2 to 3 months).

Angioedema: Angioedema involving the extremities, face, lips, mucous membranes, tongue, glottis or larynx has been reported in approximately one in 1000 patients. Angioedema involving the upper airways has caused fatal airway obstruction. (See WARNINGS.)

Cough: Cough has been reported in 0.5-2% of patients treated with captopril in clinical trials.

The following have been reported in about 0.5 to 2 percent of patients but did not appear at increased frequency compared to placebo or other treatments used in controlled trials: gastric irritation, abdominal pain, nausea, vomiting, diarrhea, anorexia, constipation, aphthous ulcers, peptic ulcer, dizziness, headache, malaise, fatigue, insomnia, dry mouth, dyspnea, cough, alopecia, paresthesias.

Other clinical adverse effects reported since the drug was marketed are listed below by body system. In this setting, an incidence or causal relationship cannot be accurately determined.

General: Asthenia, gynecomastia.

Cardiovascular: Cardiac arrest, cerebrovascular accident/insufficiency, rhythm disturbances, orthostatic hypotension, syncope.

Dermatologic: Bullous pemphigus, erythema multiforme (including Stevens-Johnson syndrome), exfoliative dermatitis.

Gastrointestinal: Pancreatitis, glossitis, dyspepsia.

Hematologic: Anemia, including aplastic and hemolytic.

Hepatobiliary: Jaundice, hepatitis, including rare cases of necrosis, cholestasis.

Metabolic: Symptomatic hyponatremia.

Musculoskeletal: Myalgia, myasthenia.

Nervous/Psychiatric: Ataxia, confusion, depression, nervousness, somnolence.

Respiratory: Bronchospasm, eosinophilic pneumonitis, rhinitis.

Special Senses: Blurred vision.

Urogenital: Impotence.

As with other ACE inhibitors, a syndrome has been reported which may include: fever, myalgia, arthralgia, interstitial nephritis, vasculitis, rash or other dermatologic manifestations, eosinophilia and an elevated ESR. Findings have usually resolved with discontinuation of treatment.

Altered Laboratory Findings: Serum Electrolytes: Hyperkalemia: small increases in serum potassium, especially in patients with renal impairment (see PRECAUTIONS).

Hyponatremia: particularly in patients receiving a low sodium diet or concomitant diuretics.

BUN/Serum Creatinine: Transient elevations of BUN or serum creatinine especially in volume or salt depleted patients or those with renovascular hypertension may occur. Rapid reduction of longstanding or markedly elevated blood pressure can result in decreases in the glomerular filtration rate and, in turn, lead to increases in BUN or serum creatinine.

Hematologic: A positive ANA has been reported.

Liver Function Tests: Elevations of liver transaminases, alkaline phosphatase, and serum bilirubin have occurred.

OVERDOSAGE: Primary concern is correction of hypotension. Volume expansion with an I.V. infusion of normal saline is the treatment of choice for restoration of blood pressure. Captopril may be removed from the general circulation by hemodialysis.

DOSAGE AND ADMINISTRATION: CAPOTEN (captopril) should be taken one hour before meals. In hypertension, CAPOTEN may be dosed bid or tid. Dosage must be individualized; see DOSAGE AND ADMINISTRATION section of package insert for detailed information regarding dosage in hypertension and in heart failure. Because CAPOTEN (captopril) is excreted primarily by the kidneys, dosage adjustments are recommended for patients with impaired renal function.

Consult package insert before prescribing CAPOTEN (captopril).

HOW SUPPLIED: Available in tablets of: 12.5 mg in bottles of 100 and 1000; 25 mg in bottles of 100, 1000, and 5000; 50 mg in bottles of 100 and 1000; 100 mg in bottles of 100; and in UNIMATIC® unit-dose packs of 100 tablets. (J3-658U)

James (Jamie) Browning Wyeth (1946-) was born on July 6, 1946, in Chadds Ford, Pa, the youngest child of a family already noted for two generations of famed artists. His 29-year-old father, Andrew, was among the country's most widely known painters. And Andrew's father was N. C. Wyeth, the illustrator of classics beloved through the years by children of all ages. Two of Jamie's aunts and an uncle were also artists.

Jamie dropped out of school after completing the sixth grade and pursued his studies with a tutor. The schedule was demanding: 3 hours of school studies with his tutor in the morning, 4 hours of artwork with his Aunt Carolyn Wyeth in the afternoon, studying such basic shapes as the cube, the cone, and the globe, reminiscent perhaps of Cézanne's dictum that nature should be treated "in terms of the cylinder, the sphere, the cone, all in perspective." In 1960, at the age of 14, Jamie began his studies with his father. Three years later he moved to New York City, where he studied anatomy firsthand at a hospital morgue and, before age 20, had his first major show.

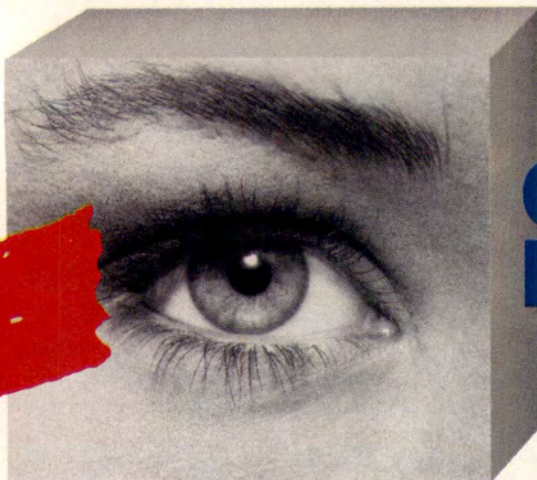
Born as he was into post-World War II America, Jamie Wyeth's paintings punctuate the history of the country since that time. Beginning with *Draft Age*, a major painting completed in 1965, when Jamie was 19, they progress through space launches, a posthumous portrait of John F. Kennedy, the Watergate proceedings, the first moon landing, and the Laotian boat people. Interspersed are private scenes from his personal history at his summer home in Monhegan, off the coast of Maine, or at his farm in Delaware: gulls, sheep, pigs, starfish, a herd of Hampshires. Most difficult for him are portraits, and he accordingly limits himself to perhaps one a year. His greatest joys are painting out-of-door scenes and animals.

Kalounna in Frogtown (cover) is one of Jamie Wyeth's more recent paintings, completed in 1986, when Wyeth was 40. His friend, Kalounna, was 11 years old and a Laotian refugee. Frogtown was a community near Chadds Ford where one day

Wyeth had been struck by the sight of a huge red truck parked in front of a house that had matching shutters. With just three subjects—Kalounna, the truck, the house—Wyeth has managed to pose questions that will not go away. At first glance the painting is as simple and as straightforward as the frontal pose of Kalounna, but on further reflection questions as deep and as indefinable as the expression on the boy's face arise. Who, if anyone, lives in the house? Why is the truck sitting idle on the grass? Is it because of lack of work? Lack of parts? Lack of money to repair? Where did Kalounna get his T-shirt with the logo of the soap opera "Dallas"? Did he ever wonder who shot JR? Who killed JFK? Why is one hand clenched in a fist, the fingers of the other splayed like the tree limbs behind him? What is Kalounna's future? Who is Kalounna?

These are just some of the questions Wyeth's painting asks. But they are questions about particulars and presumably will have specific answers now or later. The painting raises other, universal, questions as well, questions that have no easy answers—if any. Kalounna's three-quarter figure, silhouetted against an uncertain sky, for example, nearly divides the painting in half. To the right on the side of the clenched fist, stands the truck. In the left half, on the side of the splayed fingers, stands the house. Kalounna thus stands between two cultures: that of home, comfort, security, submission; and that of the open road, uncertainty, freedom, self-determination. His red shirt, in which the red of the truck and the red of the house are linked, suggests that the reconciliation of the two cannot be made without pain for Kalounna himself. But, says, Wyeth, such a task does not face just Kalounna. It is a universal task that faces all equally. Like Kalounna, all must reconcile their opposing halves: home/adventure, security/freedom, East/West, masculine/feminine, need/resource, obligation/right. Like Kalounna, we know such a task brings pain, but also, like Kalounna, we are not afraid to confront it. Head-on, if necessary.—M. Therese Southgate, MD

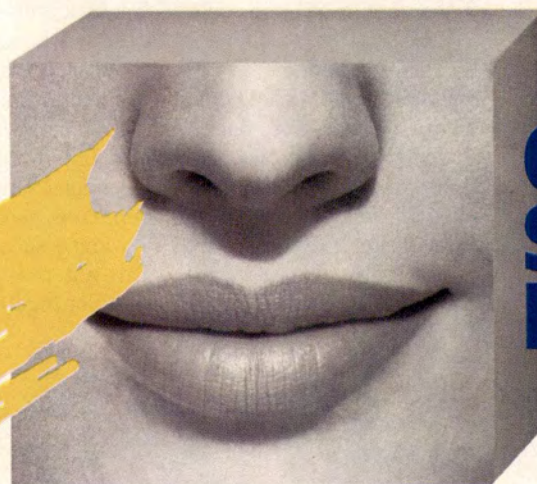
Jamie Wyeth (1946-), *Kalounna in Frogtown*, 1986, American. Oil on canvas. 91.1 x 127.3 cm. Courtesy of the Terra Museum of American Art, Chicago, Ill; Daniel J. Terra Collection.



**CLEARER
EYES.**



**DRIER
NOSE.**



**OUTSTANDING
SYMPTOM
RELIEF.**

Once-a-day

HISMANAL[®]

(ASTEMIZOLE) 10mg Tablets

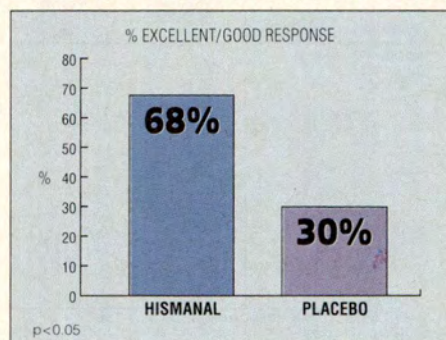
OUTSTANDING SYMPTOM RELIEF

HISMANAL offers proven relief of runny nose, sneezing, and itchy/watery eyes.^{1,2} And HISMANAL symptom relief starts on day one.

With HISMANAL, patients benefit from the convenience of once-a-day dosing with no sedative effect greater than placebo.

When your patients need an antihistamine that leaves them alert, choose HISMANAL. After all, they deserve a product that really works at relieving symptoms.

PHYSICIAN AND PATIENT GLOBAL EVALUATION¹



Adapted from Knight¹



Please see brief summary of prescribing information on adjacent page.

HISMANAL[®]

(ASTemizole)[®] 10mg Tablets

Before prescribing, please consult complete prescribing information of which the following is a brief summary.

DESCRIPTION: HISMANAL[®] (astemizole) is a histamine H₁-receptor antagonist available in scored white tablets for oral use.

CONTRAINDICATIONS: HISMANAL is contraindicated in patients with known hypersensitivity to astemizole or any of the inactive ingredients.

PRECAUTIONS: General: Caution should be given to potential anticholinergic (drying) effects in patients with lower airway diseases, including asthma. Caution should be used in patients with cirrhosis or other liver diseases (See Clinical Pharmacology section). HISMANAL does not appear to be dialyzable. Caution should also be used when treating patients with renal impairment.

Information for Patients: Patients taking HISMANAL should receive the following information and instructions. Antihistamines are prescribed to reduce allergic symptoms. Patients should be questioned about pregnancy or lactation before starting HISMANAL therapy, since the drug should be used in pregnancy or lactation only if the potential benefit justifies the potential risk to fetus or baby (see Pregnancy subsection). Patients should be instructed 1) to take HISMANAL only as needed, 2) not to exceed the prescribed dose, and 3) to take HISMANAL on an empty stomach, e.g., at least 2 hours after a meal. No additional food should be taken for at least 1 hour post-dosing. Patients should also be instructed to store this medication in a tightly closed container in a cool, dry place, away from heat or direct sunlight, and away from children.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenic potential has not been revealed in rats given 260x the recommended human dose of astemizole for 24 months, or in mice given 400x the recommended human dose for 18 months. Micronucleus, dominant lethal, sister chromatid exchange and Ames tests of astemizole have not revealed mutagenic activity. Impairment of fertility was not observed in male or female rats given 200x the recommended human dose.

Pregnancy: Pregnancy Category C: Teratogenic effects were not observed in rats administered 200x the recommended human dose or in rabbits given 200x the recommended human dose. Maternal toxicity was seen in rabbits administered 200x the recommended human dose. Embryocidal effects accompanied by maternal toxicity were observed at 100x the recommended human dose in rats. Embryotoxicity or maternal toxicity was not observed in rats or rabbits administered 50x the recommended human dose. There are no adequate and well controlled studies in pregnant women. HISMANAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Metabolites may remain in the body for as long as 4 months after the end of dosing, calculated on the basis of 6 times the terminal half-life (See Clinical Pharmacology section).

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because certain drugs are known to be excreted in human milk, caution should be exercised when HISMANAL is administered to a nursing woman. HISMANAL is excreted in the milk of dogs.

Pediatric Use: Safety and efficacy in children under 12 years of age has not been demonstrated.

ADVERSE REACTIONS: The reported incidences of adverse reactions listed in the following table are derived from controlled clinical studies in adults. In these studies the usual maintenance dose of HISMANAL[®] (astemizole) was 10 mg once daily.

ADVERSE EVENT	Percent of Patients Reporting		
	Controlled Studies*		
	Hismanal (N = 1630) %	Placebo (N = 1109) %	Classical** (N = 304) %
Central Nervous System			
Drowsiness	7.1	6.4	22.0
Headache	6.7	9.2	3.3
Fatigue	4.2	1.6	11.8
Appetite increase	3.9	1.4	0.0
Weight increase	3.6	0.7	1.0
Nervousness	2.1	1.2	0.3
Dizzy	2.0	1.8	1.0
Gastrointestinal System			
Nausea	2.5	2.9	1.3
Diarrhea	1.8	2.0	0.7
Abdominal pain	1.4	1.2	0.7
Eye, Ear, Nose, and Throat			
Mouth dry	5.2	3.8	7.9
Pharyngitis	1.7	2.3	0.3
Conjunctivitis	1.2	1.2	0.7
Other			
Arthralgia	1.2	1.6	0.0

*Duration of treatment in Controlled Studies ranged from 7 to 182 Days

**Classical Drugs: Clemastine (N = 137); Chlorpheniramine (N = 100); Pheniramine Maleate (N = 47); d-Chlorpheniramine (N = 20)

Adverse reaction information has been obtained from more than 7500 patients in all clinical trials. Weight gain has been reported in 3.6% of astemizole treated patients involved in controlled studies, with an average treatment duration of 53 days. In 46 of the 59 patients for whom actual weight gain data was available, the average weight gain was 3.2 kg. Less frequently occurring adverse experiences reported in clinical trials or spontaneously from marketing experience with HISMANAL include: angioedema, bronchospasm, depression, edema, epistaxis, myalgia, palpitation, photosensitivity, pruritus, and rash. Marketing experiences include isolated cases of convulsions. A causal relationship with HISMANAL has not been established.

OVERDOSAGE: In the event of overdosage, supportive measures including gastric lavage and emesis should be employed. Cases of overdose have been reported from foreign marketing experience. Although overdoses of up to 500 mg have been reported with no ill effects, cases of serious ventricular arrhythmias, including Torsades de pointes, following overdoses of greater than 200 mg have been reported. Patients should be carefully observed and ECG monitoring is recommended in cases of suspected overdose. An appropriate antiarrhythmic treatment may be needed. HISMANAL does not appear to be dialyzable. Care should be taken not to exceed dosing recommended in the DOSAGE AND ADMINISTRATION section. Oral LD₅₀ values for HISMANAL were 2052 mg/kg in mice and 3154 mg/kg in rats. In neonatal rats, the oral LD₅₀ was 905 mg/kg in males and 1235 mg/kg in females.

NDC 50458-510-01 (10 × 10 blister) NDC 50458-510-10 (100 tablets)
Store tablets at room temperature (59°-86°F) (15°-30°C). Protect from moisture.

References: 1. Knight A. Astemizole—a new, non-sedating antihistamine for hayfever. *J Otolaryngol.* 1985;14(2):85-88. 2. Howarth PH, Holgate ST. Comparative trial of two non-sedative H₁ antihistamines, terfenadine and astemizole, for hay fever. *Thorax* 1984;39:668-672.

JANSSEN
PHARMACEUTICA

40 Kingsbridge Road
Piscataway, NJ 08855-3998

May 1991

JPI-HS-103-2

December 1988
U.S. Patent 4,219,559
1P4198A-M

Get the facts on every physician in the U.S.



The American Medical Directory, 32nd Edition

The single most authoritative source of information about the physicians in the U.S. — completely updated and ready for immediate shipment.

Demographics, Credentials, and Professional Details

More than 633,000 entries. Complete information, from primary sources, on every physician in the United States. 30,000 brand new entries. 300,000 updated addresses.

Choose the Four-Volume Set or Compact Computer Disk

Select either the traditional handsomely bound, 5,300 page, four-volume set; or the new 4 3/4" IBM compatible CD-ROM laser encoded disk. The same information in the format most convenient for you.

Order Your Copy of the American Medical Directory 32nd Edition Today!

Hard Bound Edition, \$495.;

CD-ROM Laser Disk (single user system), \$695.;

CD-ROM Laser Disk (network system), \$1095.

Call toll-free 1-800-621-8335

VISA, MasterCard, American Express and Optima only.

Reference 0P390890 (hardbound edition)

0P391390 (single user system)

0P391490 (network version)



Appropriate U.S. state and Canadian
sales tax will be added as applicable.

Improvement that depressed patients
can wake up and notice...



Better days start with better nights

- Up to 97% of depressed patients experience some kind of sleep disturbance, and often it may be the presenting sign.¹
- Sleep disturbances respond particularly well to once-a-day Sinequan® (doxepin HCl)... as it works to relieve underlying depression and anxiety.^{2,3}

The possibility of drug interaction should be considered if the patient is receiving other drugs concomitantly.

Antidepressant
effectiveness with the
nighttime advantage

SINEQUAN[®]
(doxepin HCl)

150-mg, 100-mg, 75-mg, 50-mg,
25-mg, and 10-mg CAPSULES;
ORAL CONCENTRATE, 10-mg/mL,
120-mL (4-oz) bottles

ROERIG **Pfizer**
A division of Pfizer Pharmaceuticals

© 1989, Pfizer Inc.

*The 150-mg capsule strength is intended for maintenance therapy only and is not recommended for initiation of treatment.

Please see brief summary of SINEQUAN® (doxepin HCl) prescribing information on next page.

References: 1. Goldberg HL. Sleep disturbance as a manifestation of depression. In *Somatic Depression: Insights for Primary Care Physicians*. Proceedings of a symposium held in Miami, Dec 4, 1978. New York: Postgraduate Medicine Communications; pp 13-18. 2. Karacan I, Blackburn AB, Thornby JI, et al. The effect of doxepin HCl (Sinequan) on sleep patterns and clinical symptomatology of neurotic depressed patients with sleep disturbance. In *Sinequan® (doxepin HCl): A Monograph of Recent Clinical Studies*. Princeton, NJ: Excerpta Medica, 1977; pp 4-22. 3. Goldberg HL, Finnerty RJ. The use of doxepin in the treatment of symptoms of anxiety neurosis and accompanying depression: A collaborative controlled study. *Am J Psychiatry* 1972; 129(July):74-77.

SINEQUAN® (doxepin HCl)

BRIEF SUMMARY

SINEQUAN® (doxepin HCl) Capsules/Oral Concentrate

Contraindications: SINEQUAN is contraindicated in individuals who have shown hypersensitivity to the drug. Possibility of cross sensitivity with other dibenzoxepines should be kept in mind.

SINEQUAN is contraindicated in patients with glaucoma or a tendency to urinary retention. These disorders should be ruled out, particularly in older patients.

Warnings: The once-a-day dosage regimen of SINEQUAN in patients with intercurrent illness or patients taking other medications should be carefully adjusted. This is especially important in patients receiving other medications with anticholinergic effects.

Usage in Geriatrics: The use of SINEQUAN on a once-a-day dosage regimen in geriatric patients should be adjusted carefully based on the patient's condition.

Usage in Pregnancy: Reproduction studies have been performed in rats, rabbits, monkeys and dogs and there was no evidence of harm to the animal fetus. The relevance to humans is not known. Since there is no experience in pregnant women who have received this drug, safety in pregnancy has not been established. There has been a report of apnea and drowsiness occurring in a nursing infant whose mother was taking SINEQUAN.

Usage in Children: The use of SINEQUAN in children under 12 years of age is not recommended because safe conditions for its use have not been established.

Drug Interactions

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN. The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Cimetidine: Cimetidine has been reported to produce clinically significant fluctuations in steady-state serum concentrations of various tricyclic antidepressants. Serious anticholinergic symptoms (i.e., severe dry mouth, urinary retention and blurred vision) have been associated with elevations in the serum levels of tricyclic antidepressant when cimetidine therapy is initiated. Additionally, higher than expected tricyclic antidepressant levels have been observed when they are begun in patients already taking cimetidine. In patients who have been reported to be well controlled on tricyclic antidepressants receiving concurrent cimetidine therapy, discontinuation of cimetidine has been reported to decrease established steady-state serum tricyclic antidepressant levels and compromise their therapeutic effects.

Alcohol: It should be borne in mind that alcohol ingestion may increase the danger inherent in any intentional or unintentional SINEQUAN overdose. This is especially important in patients who may use alcohol excessively.

Tolazamide: A case of severe hypoglycemia has been reported in a type II diabetic patient maintained on tolazamide (1 gm/day) 11 days after the addition of doxepin (75 mg/day).

Precautions: Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking the drug. Patients should also be cautioned that their response to alcohol may be potentiated.

Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy. Prescriptions should be written for the smallest feasible amount.

Should increased symptoms of psychosis or shift to manic symptomatology occur, it may be necessary to reduce dosage or add a major tranquilizer to the dosage regimen.

Adverse Reactions: NOTE: Some of the adverse reactions noted below have not been specifically reported with SINEQUAN use. However, due to the close pharmacological similarities among the tricyclics, the reactions should be considered when prescribing SINEQUAN (doxepin HCl).

Anticholinergic Effects: Dry mouth, blurred vision, constipation, and urinary retention have been reported. If they do not subside with continued therapy, or become severe, it may be necessary to reduce the dosage.

Central Nervous System Effects: Drowsiness is the most commonly noticed side effect. This tends to disappear as therapy is continued. Other infrequently reported CNS side effects are confusion, disorientation, hallucinations, numbness, paresthesias, ataxia, extrapyramidal symptoms, seizures, tardive dyskinesia, and tremor.

Cardiovascular: Cardiovascular effects including hypotension, hypertension, and tachycardia have been reported occasionally.

Allergic: Skin rash, edema, photosensitization, and pruritus have occasionally occurred.

Hematologic: Eosinophilia has been reported in a few patients. There have been occasional reports of bone marrow depression manifesting as agranulocytosis, leukopenia, thrombocytopenia, and purpura.

Gastrointestinal: Nausea, vomiting, indigestion, taste disturbances, diarrhea, anorexia, and aphthous stomatitis have been reported. (See anticholinergic effects.)

Endocrine: Raised or lowered libido, testicular swelling, gynecomastia in males, enlargement of breasts and galactorrhea in the female, raising or lowering of blood sugar levels, and syndrome of inappropriate antidiuretic hormone secretion have been reported with tricyclic administration.

Other: Dizziness, tinnitus, weight gain, sweating, chills, fatigue, weakness, flushing, jaundice, alopecia, headache, exacerbation of asthma, and hyperpyrexia (in association with chlorpromazine) have been occasionally observed as adverse effects.

Withdrawal Symptoms: The possibility of development of withdrawal symptoms upon abrupt cessation of treatment after prolonged SINEQUAN administration should be borne in mind. These are not indicative of addiction and gradual withdrawal of medication should not cause these symptoms.

Dosage and Administration: For most patients with illness of mild to moderate severity, a starting daily dose of 75 mg is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg/day to 150 mg/day.

In more severely ill patients higher doses may be required with subsequent gradual increase to 300 mg/day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg/day.

In patients with very mild symptomatology or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg/day.

The total daily dosage of SINEQUAN may be given on a divided or once-a-day dosage schedule. If the once-a-day schedule is employed the maximum recommended dose is 150 mg/day. This dose may be given at bedtime. **The 150 mg capsule strength is intended for maintenance therapy only and is not recommended for initiation of treatment.**

Anti-anxiety effect is apparent before the antidepressant effect. Optimal antidepressant effect may not be evident for two to three weeks.

Overdosage

A. Signs and Symptoms

1. Mild: Drowsiness, stupor, blurred vision, excessive dryness of mouth.
 2. Severe: Respiratory depression, hypotension, coma, convulsions, cardiac arrhythmias and tachycardias.
- Also: urinary retention (bladder atony), decreased gastrointestinal motility (paralytic ileus), hyperthermia (or hypothermia), hypertension, dilated pupils, hyperactive reflexes.

B. Management and Treatment

1. Mild: Observation and supportive therapy is all that is usually necessary.
2. Severe: Medical management of severe SINEQUAN overdose consists of aggressive supportive therapy. If the patient is conscious, gastric lavage, with appropriate precautions to prevent pulmonary aspiration, should be performed even though SINEQUAN is rapidly absorbed. The use of activated charcoal has been recommended, as has been continuous gastric lavage with saline for 24 hours or more. An adequate airway should be established in comatose patients and assisted ventilation used if necessary. EKG monitoring may be required for several days, since relapse after apparent recovery has been reported. Arrhythmias should be treated with the appropriate antiarrhythmic agent. It has been reported that many of the cardiovascular and CNS symptoms of tricyclic antidepressant poisoning in adults may be reversed by the slow intravenous administration of 1 mg to 3 mg of physostigmine salicylate. Because physostigmine is rapidly metabolized, the dosage should be repeated as required. Convulsions may respond to standard anticonvulsant therapy, however, barbiturates may potentiate any respiratory depression. Dialysis and forced diuresis generally are not of value in the management of overdosage due to high tissue and protein binding of SINEQUAN.

More detailed professional information available on request.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

CHIEF OF DIVISION OF HEAD AND NECK SURGERY

The Department of Surgery of the UCLA School of Medicine is searching for a tenured faculty member to serve as the Chief of the Division of Head and Neck Surgery. One of nine surgical divisions in the Department, Head and Neck Surgery has approx. 20 full-time faculty members, 32 residents and fellows, and 45 staff members. Candidates for this position will be surgeons with proven contributions to research, with strong commitments to education and training, and recognition as an excellent surgeon and clinician. Recommendations and inquiries should be directed to:

Michael J. Zinner, M.D., Chairman
Department of Surgery
UCLA School of Medicine
72-131 CHS
10833 Le Conte Avenue
Los Angeles, CA 90024

UCLA is an affirmative action employer.

The benefits of group practice.

Physicians who want to enjoy the advantages of group practice without an administrative burden will really appreciate CIGNA Healthplan. As a physician at one of our health care centers, you'll join a team of equally dedicated physicians practicing within a consultative environment. But, unlike a group practice, your administrative work is carefully orchestrated by a competent staff of CIGNA Healthplan employees, enabling you to focus on patient care.

Currently, we have practice opportunities available for:

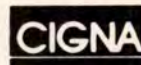
ARIZONA **General & Vascular Surgeons**

Positions available for BC/BE surgeons. MUST be able to acquire vascular surgery privileges by submitting vascular case list or by training. Practice is approximately 50% general surgery and 50% vascular surgery to start.

We provide competitive compensation and benefits package, paid malpractice insurance and continuing medical education. To receive more information about becoming a CIGNA physician, call or send CV to:

CIGNA Healthplan of Arizona
Professional Staffing
Dept. 26
P.O. Box 16145
Phoenix, AZ 85011-6145
800-252-2471
EOE

CIGNA Healthplan
Team with results.™



Preexisting Conditions 'Hold Americans Hostage' to Employers and Insurance

"MILLIONS OF hardworking, honest Americans are being held hostage by insurance companies. I am one of them."

So begins a letter to President George Bush from Mary Evans, a Columbus, Ohio, woman with an increasingly common tale to tell:

- Savings wiped out after payment denials for treatment of preexisting conditions (in Evans' case, surgery to remove breast cancer that her insurer says she "should have" found before she had to switch policies because of her husband's job change);

- Fear that recurrence would require a bone marrow transplant she could not afford if her insurance would not pay;

- Disgust with what Evans calls the "mountain of paperwork" and "snippy, haughty, surly" treatment from insurance companies;

- No apparent way out. If she dared to change insurers, a new policy would almost surely exclude cancer coverage.

"If you have the misfortune of getting a catastrophic illness, you are literally held hostage by the company that is presently insuring you," says Evans.

"It's an easy area of the law to advise people in because they have no rights," says Linda Kilb, staff attorney for the Disability Rights Education and Defense Fund, Berkeley, Calif. "It is legal discrimination. If there is any evidence that [a medical condition] is going to cost the insurer money, they don't have to cover you."

'Ditching' Moderate Risks?

Even reputable companies are "ditching" moderate risks. Blue Cross of Illinois in December yanked coverage from the Independent Writers of Chicago. "They said we did not fulfill underwriting guidelines because we were an association and not an employer, but they'd covered us for 10 years," says Nancy Parsegian, who heads the group's insurance committee.

Conversion policies are too expensive for some of the 60 members who were covered, and are now completely with-

out health insurance. Parsegian notes that those who have applied for extensions have had trouble with the paperwork and bureaucracy involved.

Parsegian says she gave up on finding another group policy after even top-rated companies insisted on excluding people who had things "that didn't seem terribly risky," such as mild hypertension or diabetes, or who had counseling, "for depression in particular, but even family and marital counseling. They would just not insure these people."

Parents whose children are born with disabilities often become unsuspecting victims of their policy's fine print. "They change jobs, or their employer will change insurers, and they will be unable to enroll their dependent child in the new plan," says Kilb.

Federal law enables policyholders to get 18-month extensions when they no longer qualify as members of a group policy. But, Kilb says, "ultimately they lose coverage."

Some people with preexisting conditions succeed in getting on a spouse's or some other large group policy with looser rules, but that itself is a gamble, says Oakland, Calif. attorney Steve Schear. "If people disclose every little thing wrong, they could be refused coverage. If they don't, and they make a substantial claim, they are commonly denied coverage" for failing to provide full disclosure of medical history.

Not wanting to be held hostage can cause people to put off needed care. Schear says he has clients who are "actually afraid to go to a doctor, because something might be documented on their records that will make it difficult for them to get health care" coverage if they ever need or want to change jobs.

One million eighteen thousand Americans were laid off in 1990, according to the federal Bureau of Labor Statistics. The average length of time a job was held, according to a 1987 bureau survey, was 4.2 years. The average job turnover rate in 1990 was 10.8%, according to the Bureau of National Affairs, a private

research and publishing firm in Washington, DC.

A 1987 survey of 2000 employers who offer insurance, conducted by Foster Higgins, an employee benefits consulting firm in New York, NY, found that 57% had preexisting condition clauses in the health policies they offered to employees. Though more common with small employers (64% of firms with less than 500 employees), they were still very prevalent in large companies (45% of firms with more than 10 000 employees). And exclusions and waiting periods for coverage of preexisting conditions are even more frequently used now, says John Erb, a managing consultant with Foster Higgins.

"People get ensnared without any malfeasance on their part, caught not even through carelessness but simply fate," says Sara Watson, PhD, director of the Institute for Rehabilitation and Disability Management of the Washington Business Group on Health. And the harm preexisting condition clauses create "is just so evident."

Insurers Protected, Not Insured

The insurance industry says high premiums, waiting periods, condition-specific payment denials, and even complete denial of coverage to people who have preexisting conditions are necessary to protect companies from people who only want to pay for insurance when they need it.

There is, however, no protection from these rules for those paying for insurance all along. "The people who most need coverage are least able to get it" if they have to change policies, says Schear.

Even some in the industry acknowledge that things are out of hand. "There has been a substantial increase in rating and underwriting practices that are inappropriate," says Tom Buchberger, director of policy and strategic issues for Aetna Life & Casualty, Hartford, Conn.

Preexisting condition clauses "cause a lot of people to hang onto jobs because

they're scared that if they switch they will go uncovered for a period of time for the condition they have," says Blue Cross spokesperson Julie Boyle.

Restrictions on their use in the small-employer market, which accounts for the majority of uninsured and underinsured Americans, are being proposed by the National Association of Insurance Commissioners, the Health Insurance Association of American, and Blue Cross and Blue Shield.

But the reforms would leave most affected people "still out in the cold," says David Lyons, Iowa's insurance commissioner and spokesperson for the National Association of Insurance Commissioners' Health Care Access Working Group.

Entire professions, ranging from health care professionals to restaurant workers, florists, and car salesmen, are redlined, offered rates that few can afford, or are refused any coverage at all by many insurers, says Mary O'Sullivan, executive director of the Health Access Foundation in San Francisco, Calif. "The range is extraordinary, and pretty arbitrary. It doesn't have to be actuarially sound, they can just do it."

The smallest employers, those who have less than 50 employees, are often denied coverage for their whole group unless individuals with preexisting conditions are excluded, says Karen Horkitz, senior research assistant at the Employee Benefits Research Institute, Washington, DC.

'Concept of Insurance' Eroding

"The whole concept of insurance" as a way to spread risk is eroding, says Horkitz. Commercial insurers have been picking off the healthiest groups by offering lower prices than nonprofits like Blue Cross and Blue Shield, leaving the nonprofits with the sickest populations. Now even the Blues have given up the "mission" of community rating, and use preexisting condition clauses and experience ratings, she says.

"Things have been escalating that way all during the latter half of this century, so that now in every part of the system, people are saying 'I don't want to subsidize, [and] can't afford to subsidize, other people,'" says Horkitz.

Exacerbating the problem, says Lyons, are predatory insurers who offer cheap "teaser" rates to low-risk groups with waiting periods for coverage of preexisting conditions of (usually) 1 year. "As soon as these underwriting protections to the insurer wear off, they raise the rates 100%" or more, pushing the employer to look for coverage elsewhere before its employees develop costly conditions.

High-Risk Pools Help Few

State governments are trying to respond to the problem. Nearly half have special "high-risk pools" for "uninsurables," usually defined as those who have been denied coverage as individuals, had coverage terminated, or had been asked to pay excessive premiums. But these programs are themselves often too costly for all but the upper middle class.

"Most people with medical conditions are unable to afford the higher premiums" in Maine's risk pool, which has only 600 enrollees, says a member of that state's legislature, Rep Charlene Rydell of Brunswick.

California's major risk medical insurance plan enrolled 3000 people in its first 2 months, and is getting 100 applications a day. With its unique tobacco tax subsidy, it will be able to handle 10 000 people. But "hundreds of thousands of people in California are eligible," says executive director John Ramey.

Illinois' comprehensive health insurance program, another of the few high-risk pools with a state subsidy, has a year-long waiting list.

For those individuals who cannot get in, "a lot of them are just stuck," says Norman Godden, director of the Illinois Insurance Information Service hotline.

Some exclusions are written for as long as 7 years, and the reasons for exclusion are expanding, adds Gail Edler, who staffs the hotline. "It used to be if someone had a diagnosis but no treatment" for a condition, insurance companies would provide coverage. "But now that fine line is gone."

"The most encouraging thing I can tell people is to hang in there until they're 65 and can get Medicare," says Edler. Some have moved out of state, she says, because neighboring Indiana's risk pool has no waiting list or enrollment limit and only a 90-day residency requirement.

Cases of people moving into Indiana because of the state's Comprehensive Health Insurance Association, one of the oldest and most successful risk pools, have been noted, says services coordinator Diane Vande Boche. Premiums are subsidized by assessments on insurers, based on the amount of premiums they bill in the state.

"We've had a jump in enrollment since last fall. A lot of underwriters are clamping down," says Vande Boche. She notes that insurers are "using more combinations of conditions, for instance, hypertension and something else, in rejection letters."

The state keeps a list of about 20 conditions like cancer, diabetes, and acquired immunodeficiency syndrome, for

which rejection letters are not required to prove uninsurability, but "we could probably add to the list," she says.

For people denied coverage only for a preexisting condition but offered a policy covering everything but treatment for that condition, "99% of those cases we can't help," says Vande Boche.

Small-Group Reforms Go for 'Chunk'

The insurance industry's proposed limits on preexisting condition clauses are limited to the small-group insurance market, policies for between three and 25 persons. Up to 75% of Americans who lack access to health care are small-business employees and their dependents, says Health Insurance Association of America spokesperson Richard Coorsh.

The reforms would provide coverage for up to 40% of the uninsured, says Lyons. "We're trying to carve [the problem] into achievable chunks. If the reforms work, there's no reason we can't expand them" to larger groups and individuals, he says.

Policy prices are so high and denials are so frequent in this segment of the market partly because one or two serious, chronic conditions can bankrupt the premium pool from such small groups, says Coorsh.

Key to the reform proposals is a reinsurance mechanism, invisible to consumers, to respread the risk, a "safety valve for carriers that might end up with a disproportionately large number of high-risk cases," says Lyons.

With the reinsurance mechanism in place, the National Association of Insurance Commissioners' proposal would limit rates to 25% above the average for each policy category, and that average could be no more than 20% above the lowest-rated class of business. The maximum annual rate increase for the group's health status, claims experience, or duration of coverage would be 15%, with further increases allowed for trends in health care cost and use.

Insurers could not invoke preexisting condition clauses when an employer changes insurers or an employee changes jobs within the small-group market, and they could not terminate coverage of individuals or dependents within a group.

"These provisions would go a long way toward guaranteeing continuity of coverage," says Lyons. Coorsh says they will cause "a little short-term pain for the industry, but long-term gain. Everybody believes the system needs improvement."

Advocates of total system overhaul, however, say the proposals are "Band-Aids" and "survival" tactics. "They

**Break
the
H₂ Habit**

THE UN-H₂ for Maintenance



1gm BID!

- Controlled studies confirm CARAFATE® (sucralfate) delivers unsurpassed duodenal ulcer remission rates¹⁻¹¹
- Mucosal biopsy scores of healed ulcer tissue returned to near normal levels ($P < 0.02$) during 1 year of CARAFATE maintenance therapy¹
- No known systemic interactions with other medications


CARAFATE®
(sucralfate)

Nonsystemic maintenance therapy

in any benefits package is best decided by individual corporations working voluntarily with insurance companies or other third-party payers." The reluctance of insurance companies to include childhood immunizations among their benefits reflects the industry's philosophy that the purpose of insurance is to cover risks, not to pay for routine or predictable needs, Miller says.

Nevertheless, the National Vaccine Advisory Committee's report recommends that "vigorous efforts should be made, including legislation, if necessary, to assure that all managed care systems provide immunization and that all third-party payers cover routine childhood immunization as part of their basic benefits package."

According to Henderson, insurance companies "will pay for treatments for acne and ingrown toenails, but they won't pay for immunizing children against measles and other life-threatening diseases. In my opinion, this attitude is strange and unconscionable. Immunizations are the simplest and the most cost-effective medical interven-

tion that we have."

It seems paradoxical, Henderson says, "that insurance companies, which are endeavoring to minimize health care costs, are not willing to pay for one of the most cost-effective procedures in the entire medical armamentarium."

Their reluctance to pay for immunization is "ideological rather than practical," he argues. "It has been very difficult to get third-party payers to pay for mammograms, Pap[anicolaou] smears, or other preventive services. While you could argue that some of these procedures may not be cost-beneficial, I don't think there is any question about the cost-benefits of childhood immunizations."

Kenneth Bart, MD, is director of the National Vaccine Program Office, Rockville, Md, which is the federal office that oversees the nation's immunization program. According to Bart, an interagency subcommittee was appointed to help develop strategic plans for implementing the panel's recommendations. The subcommittee is expected to finish its report by next month.

In addition, the National Vaccine Advisory Committee has formed a subcommittee to examine alternatives to the existing systems for paying for the nation's immunization program. Bart expects this subcommittee will report by the end of September.

Henderson says that, as a result of the success of the immunization program in the past, the health care system has given a very low priority to vaccinations. "We're now beginning to pay for this lackadaisical attitude toward the immunization of our nation's children," he says.

The National Vaccine Advisory Committee's report concludes that, "because disease in any part of this country is a threat to all, federal, state, and local governments share responsibility for improving deficient delivery systems."

"The delivery of our most cost-effective health service cannot await the development of the ideal comprehensive child health system. Essential changes in the childhood immunization system can and should be made now."

—by Andrew Skolnick

Groups Survey Health Care Costs, Charges

A SERIES of reports, just completed or in preparation, indicates strong agreement among government, medicine, and business leaders that the remaining years of the decade will see a continuing debate on the shortcomings of the nation's health care system.

One report is coming by late summer from the 1991 Advisory Council on Social Security, another from the health subcommittee of the National Governors Association, and a third from the Department of Health and Human Services.

Meanwhile, President Bush's Administration, in the person of its budget director, Richard G. Darman, has gone to Capitol Hill to warn that the rising costs of health care are "unsustainable." Spending on health has risen from less than 6% of the gross national product three decades ago to around 12% today, Darman says. He predicts that expenditures will reach 17% of the gross national product by the end of this century and 37% by the year 2030.

Executives Have Their Say

And a just-published survey of 384 executives, who head some of the nation's largest companies, reports that more than 90% believe that either the

health care system needs to be completely rebuilt or fundamentally changed. The survey included 10 specific actions that government might take.

The two proposals receiving the highest rating for immediate action are: (1) greater use of selective contracting to purchase Medicare and Medicaid services (60%) and (2) tax incentives for small businesses to provide health benefits for employees (51%).

Slightly more than half of the executives are in favor of government intervention to control costs. But a majority (268 of the 321 executives who were asked this question) still favor company responsibility for basic hospital care coverage.

When it comes to coverage for catastrophic and long-term care, 186 of 312 executives who responded are in favor of government intervention or at least having government take a share of the responsibility.

The survey (*Health Aff.* 1991;10:98-105) was conducted by the Gallup organization and is sponsored by the Robert Wood Johnson Foundation, Princeton, NJ. "There seems to be a growing determination on the part of business leaders to proceed with major changes in the health care system," says Joel Cantor,

ScD, of the foundation's staff.

The driving force is the rising cost of providing health care coverage, Cantor suggests. In 1989, employers spent \$176.8 billion to provide health care benefits for their active and retired employees. Health insurance, of course, has become a issue between employees who are eager to maintain or expand coverage and employers who are anxious to keep costs within bounds.

More than one third of the executives surveyed said that, based on their experience, health insurance costs were their top concern, compared with the other costs of doing business. Almost two thirds say this is a major concern. Only 7% say such costs are a minor problem.

Spending by employers for health benefits has exceeded 50% of pretax corporate profits since 1982, the report says. The relentless increase in costs has made these benefits the fastest rising component of employee compensation, it says, and in 1989 in health insurance premium increases averaged 20%.

These concerns are echoed by Arnold Relman, MD, who is retiring as editor of the *New England Journal of Medicine*, Boston, Mass. He points out that, since

(Continued on p 2458.)

What's the best solution for preventing motion sickness?

- ☐ **Staying home**
- ☐ **Using Transderm Scōp[®]**
scopolamine



- ✓ **Transderm Scōp is more effective than Dramamine^{®1} for preventing nausea and vomiting. And in a recent clinical study, Transderm Scōp was demonstrated to be significantly more effective than 25 mg meclizine².**
- ✓ **The 72-hour transdermal delivery system means improved patient compliance since multiple dosing of tablets is avoided. Furthermore, patients don't have to try to medicate during an activity.**
- ✓ **Well tolerated — drowsiness occurs in only 1 of 6 people.**

So, with Transderm Scōp your patients don't have to choose between staying home or suffering the dizziness, nausea, and vomiting of motion sickness.

Transderm Scōp should not be used in children. Use with special care in the elderly and in patients taking drugs (including alcohol) capable of causing CNS effects. Dryness of the mouth occurs in about two-thirds of people.



Transderm Scōp[®]
scopolamine
The motion-sickness solution[™]

C I B A

See next page for brief summary of Prescribing Information.

Transderm Scop®

scopolamine
(formerly Transderm-V)

Transdermal Therapeutic System

Programmed delivery *in vivo* of 0.5 mg of
scopolamine over 3 days

BRIEF SUMMARY (FOR FULL PRESCRIBING
INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE

Transderm Scop is indicated for prevention of nausea and vomiting associated with motion sickness in adults. The disc should be applied only to skin in the postauricular area.

Clinical Results: Transderm Scop provides antiemetic protection within several hours following application of the disc behind the ear. In 195 adult subjects of different racial origins who participated in clinical efficacy studies at sea or in a controlled motion environment, there was a 75% reduction in the incidence of motion-induced nausea and vomiting. Transderm Scop provided significantly greater protection than that obtained with oral dimenhydrinate.

CONTRAINDICATIONS

Transderm Scop should not be used in patients with known hypersensitivity to scopolamine or any of the components of the adhesive matrix making up the therapeutic system, or in patients with glaucoma.

WARNINGS

Transderm Scop should not be used in children and should be used with special caution in the elderly. See **PRECAUTIONS**.

Since drowsiness, disorientation, and confusion may occur with the use of scopolamine, patients should be warned of the possibility and cautioned against engaging in activities that require mental alertness, such as driving a motor vehicle or operating dangerous machinery.

Potentially alarming idiosyncratic reactions may occur with ordinary therapeutic doses of scopolamine.

PRECAUTIONS

General

Scopolamine should be used with caution in patients with pyloric obstruction, or urinary bladder neck obstruction. Caution should be exercised when administering an antiemetic or antimuscarinic drug to patients suspected of having intestinal obstruction.

Transderm Scop should be used with special caution in the elderly or in individuals with impaired metabolic, liver, or kidney functions, because of the increased likelihood of CNS effects.

Information for Patients

Since scopolamine can cause temporary dilation of the pupils and blurred vision if it comes in contact with the eyes, patients should be strongly advised to wash their hands thoroughly with soap and water immediately after handling the disc.

Patients should be advised to remove the disc immediately and contact a physician in the unlikely event that they experience symptoms of acute narrow-angle glaucoma (pain in and reddening of the eyes accompanied by dilated pupils).

Patients should be warned against driving a motor vehicle or operating dangerous machinery. A patient brochure is available.

Drug Interactions

Scopolamine should be used with care in patients taking drugs, including alcohol, capable of causing CNS effects. Special attention should be given to drugs having anticholinergic properties, e.g., belladonna alkaloids, antihistamines (including meclizine), and antidepressants.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No long-term studies in animals have been performed to evaluate carcinogenic potential. Fertility studies were performed in female rats and revealed no evidence of impaired fertility or harm to the fetus due to scopolamine hydrobromide administered by daily subcutaneous injection. In the highest-dose group (plasma level approximately 500 times the level achieved in humans using a transdermal system), reduced maternal body weights were observed.

Pregnancy Category C

Teratogenic studies were performed in pregnant rats and rabbits with scopolamine hydrobromide administered by daily intravenous injection. No adverse effects were recorded in the rats. In the rabbits, the highest dose (plasma level approximately 100 times the level achieved in humans using a transdermal system) of drug administered had a marginal embryotoxic effect. Transderm Scop should be used during pregnancy only if the anticipated benefit justifies the potential risk to the fetus.

Nursing Mothers

It is not known whether scopolamine is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Transderm Scop is administered to a nursing woman.

Pediatric Use

Children are particularly susceptible to the side effects of belladonna alkaloids. Transderm Scop should not be used in children because it is not known whether this system will release an amount of scopolamine that could produce serious adverse effects in children.

ADVERSE REACTIONS

The most frequent adverse reaction to Transderm Scop is dryness of the mouth. This occurs in about two thirds of the people. A less frequent adverse reaction is drowsiness, which occurs in less than one sixth of the people. Transient impairment of eye accommodation, including blurred vision and dilation of the pupils, is also observed.

The following adverse reactions have also been reported on infrequent occasions during the use of Transderm Scop: disorientation; memory disturbances; dizziness; restlessness; hallucinations; confusion; difficulty urinating; rashes and erythema; acute narrow-angle glaucoma; and dry, itchy, or red eyes.

Drug Withdrawal: Symptoms including dizziness, nausea, vomiting, headache and disturbances of equilibrium have been reported in a few patients following discontinuation of the use of the Transderm Scop system. These symptoms have occurred most often in patients who have used the systems for more than three days.

OVERDOSAGE

Overdosage with scopolamine may cause disorientation, memory disturbances, dizziness, restlessness, hallucinations, or confusion. Should these symptoms occur, the Transderm Scop disc should be immediately removed. Appropriate parasympathomimetic therapy should be initiated if these symptoms are severe.

DOSAGE AND ADMINISTRATION

Initiation of Therapy: One Transderm Scop disc (programmed to deliver 0.5 mg of scopolamine over 3 days) should be applied to the hairless area behind one ear at least 4 hours before the antiemetic effect is required. Only one disc should be worn at any time.

Handling: After the disc is applied on dry skin behind the ear, the hands should be washed thoroughly with soap and water and dried. Upon removal of the disc, it should be discarded, and the hands and application site washed thoroughly with soap and water and dried, to prevent any traces of scopolamine from coming into direct contact with the eyes. (A patient brochure is available.)

Continuation of Therapy: Should the disc become displaced, it should be discarded, and a fresh one placed on the hairless area behind the other ear. If therapy is required for longer than 3 days, the first disc should be discarded, and a fresh one placed on the hairless area behind the other ear.

The system should be stored between 59°-86°F (15°-30°C).

CAUTION

Federal law prohibits dispensing without prescription.

Dist. by:

CIBA Consumer Pharmaceuticals
Div. of CIBA-GEIGY Corp.
Summit, NJ 07901

C88-5 (Rev. 2/88)

C I B A

References:

1. Price N et al: *Clin Ther* 1979;2:258-262. Studies at sea that demonstrated a 75% mean reduction in the incidence of nausea and vomiting associated with motion sickness with Transderm Scop, compared to 50% with Dramamine* ($P > 0.05$).
2. Dahl E: *Clin Pharmacol Ther* 1984;36:116-120. A study of mild motion sickness in a laboratory setting in which Transderm Scop* demonstrated a significantly greater reduction in the incidence of nausea and vomiting than 25 mg meclizine ($P = 0.01$) and placebo ($P = 0.003$).

The answer to a time-consuming task

Credentials Verification — It's important to both physicians and those evaluating them. Now available in your area, the National Physician Credentials Verification Service, AMA/NCVS,™ can make the process easier and better.

Here's how

For physicians: The AMA/NCVS sets up and maintains a permanent portfolio of verified information that can be used as the physician applies for licensure or privileges. The physician no longer needs to start from scratch each time an application is made.

For hospitals/boards: The AMA/NCVS provides a summary report of core credentials that have been verified with primary sources. And for the core credentials it collects, the AMA/NCVS satisfies current standards defined in the Joint Commission *Accreditation Manual for Hospitals* for primary source verification. The credentials verifier no longer needs to reverify all information.

The result

It's called a win-win situation and, best of all, it's operated by the most experienced provider of physician information: the American Medical Association.

For information on the Service, contact your co-sponsoring Medical Society office or call the AMA at 1-800-677-NCVS.

**The AMA/NCVS — it means
greater efficiency...
quality assured.**

American Medical Association

NCVS



**National
Physician
Credentials
Verification
Service™**

Changing the world of diabetes, one patient at a time



A 12-year-old boy from Tokyo learns to monitor his blood glucose. In Buenos Aires, an expectant mother with diabetes is counseled on her diet and exercise. From Sydney to Berlin, Boehringer Mannheim is developing new products and programs to improve diabetes management.

With our help, more and more healthcare professionals will become better equipped to diagnose, counsel, and treat diabetes than ever before. And that can make the world healthier, one patient at a time.

**If you're attending the
14th International Diabetes Federation Congress in Washington, DC,
on June 23-28, visit us at booth #301.**

Making a world of difference through better diabetes management

**BOEHRINGER
MANNHEIM
CORPORATION**

Boehringer Mannheim Corporation
Patient Care Systems Division
9115 Hague Road, P.O. Box 50100
Indianapolis, IN 46250-0100



(Continued from p 2454.)

the 1960s, health care expenditures have been increasing at a compound rate of between 5% and 6% a year. This is corrected for inflation, population increase, and the increasing age of the population, he says, adding: "We are now spending \$650 billion a year on health care. At this rate, we will shortly be spending a trillion dollars a year."

Looking for Common Ground

Meanwhile, another survey—commissioned by the Metropolitan Life Insurance Company (MetLife)—attempts to locate any common ground on which to build an improved health care system, and to discover what trade-offs would be acceptable. It asks, assuming that changes are needed, if those individuals who are involved are prepared to make compromises to achieve them.

The survey queried a selected sample of nine groups. They included 201 physicians, 50 union leaders, 1175 senior corporate executives, 251 hospital executives, 21 major health insurers, 260 members of Congress, 25 key committee staff, 50 state health commissioners, and 15 executives in the Department of Health and Human Services.

The groups were described as health care system stakeholders who were selected for the survey because of their influential role as payers, regulators, administrators, or providers. The physicians in the survey were chosen from all of the medical societies listed in the current directory of the American Association of Medical Society Executives.

There was across-the-board agreement that the health care system itself is sick and in need of treatment. For this treatment to be successful, they say,

some compromises will have to be made.

But there is by no means universal agreement on ways to achieve this. For instance, 70% of the union leaders queried said that the health care system needs to be rebuilt.

On the other hand, 4% of the physicians agreed with this. About one third say that only minor changes are needed.

The physicians say that they would accept requirements to follow practice guidelines; suggested that patients should consult with, and obtain the agreement of, a primary care physician before seeing a specialist; and urged that there be a fee-for-service system, paid out of a fixed budget.

They also said they would be willing to take a 10% cut in fees if their paperwork were "substantially reduced." But they were not in favor of national health insurance. —by Charles Marwick

School-Based Health Clinics Provide Essential Care

A WINNING season for the Westdale Middle School basketball team in Baton Rouge, La, was a sort of bonus for family physician Holley Galland, MD. When the director of Westdale's school-based health clinic gave preseason physicals to the players, their prospects didn't look so bright.

Galland tersely sums up what happened: "In one afternoon of screening kids on the team, I picked up three asthmatics, none of whom were stabilized, all of whom I 'tuned up,' and we had a winning season. I'm hoping a little pre-exercise medication helped these kids slow down the opposition!"

Most of the students who participate in the estimated nearly 300 school-based clinics (SBCs) in the United States are struggling against obstacles more obdurate than rival hoopsters. Recent interviews with the directors of several clinics and others who are involved with such programs confirm that, contrary to popular opinion, adolescents require medical care for a wide range of problems—and a great many can't afford it.

Two years ago, the first report on comprehensive school-based health programs by the American Medical Association's Council on Scientific Affairs (*JAMA*. 1989;261:1939-1942) estimated that "approximately 12 million American children and adolescents were without public or private health insurance coverage." It added that "even this figure underestimates the number of

young people who do not have adequate access to care," and stated that federal and private employer reductions in benefits meant that "the number of uninsured persons continues to rise."

The present recession has made matters worse, according to Julia Graham Lear, PhD, codirector of the School-Based Adolescent Health Care Program, which administers a \$17 million Robert Wood Johnson Foundation project, begun in 1987, that helps fund 23 such health services across the country.

Lear supplied the estimate of close to 300 clinics; it includes about 100 that are located in primary schools in New York. Usually when people talk about SBCs, they mean those that have been set up primarily in high schools and occasionally in middle schools (sixth, seventh, and eighth grades) to help those young people "the system" has tossed aside.

New Kids (Care) on the Block

Typical of these SBCs is one of the newest, the student health center at Franklin K. Lane High School in New York City's borough of Queens, which began full operation last month. It is one of five such facilities—one in each borough—funded by the city last summer.

Ronald Shenker, MD, its codirector, is chief, Division of Adolescent Medicine, at Schneider Children's Hospital, New Hyde Park, NY. Codirector Holly K. Shaw, RN, is at the clinic full time.

Its staff members are another physician and several more nurses, including

a pediatric nurse-practitioner and a clinical nurse specialist in mental health, and a coordinator/health educator. There is also an administrator.

Shenker says that while the 4500-student high school is in a "nice lower-middle class, multiethnic area and not the ghetto," its population comes from "a community where there are not a lot of private practitioners. Medical care is episodic, emergency room, out of the mainstream of private practice."

Many adolescents have chronic diseases like asthma and diabetes, or nutritional deficiencies. The incidence of sexually transmitted disease and other issues related to adolescent sexuality, including pregnancy, is high.

Shenker estimates that 20% of the students are eligible for Medicaid reimbursement, which is sought, but that all the students with parental permission to be in the program (a requirement at all schools) are treated: "Nobody pays out of pocket."

"Since there's no way our staffing and our financing can take care of 4500 kids," says Shenker, "we're targeting the ninth grade—in conjunction with a special health program already in place in that grade—to see if we can improve their health care. The hope is that they'll still be in school when they're in the 12th grade, and not drop out." The clinic is open to all students, however.

"We see quite a number of kids with emotional problems, and we find a high incidence of mental illness," adds Mar-

tha Arden, MD, an associate professor of pediatrics at Schneider Hospital who spends 60% of her time at the school.

One of the most unusual cases was a good student who came to the health center with what was diagnosed as appendicitis. After transfer to Schneider Hospital—all of the SBCs nationwide have some affiliation with a local hospital—and a thorough evaluation, it was discovered that the girl had multiple personality disorder. Another “self” had no symptoms, Arden said. The student has been hospitalized—a suspected victim of sexual abuse—and the case reported to the proper authorities. Another report was sent in on a girl who showed up at the clinic with back pain—“her mom had been beating her.”

Medical and Social Impact

Such cases, which (except for the psychiatric diagnosis) school clinic officials agree are not that rare, are one reason for the facilities' effectiveness in the areas they serve. Even if parents could afford medical care, say the physicians, they would not seek it in some cases.

In others, medical care simply hasn't been there for some families. When it becomes available, it changes lives. The Johnson Foundation's Lear likes to quote the director of an SBC in the Bronx, NY. He recently said, “This past year, the first asthmatic graduated from Morris High School.”

Medically unsophisticated listeners who heard Steven Tames, MD, say this on the *Today* show, Lear suggests, probably didn't realize what a “miracle” it represents. It is a refutation, she says, of the common scenario according to which “kids with asthma got no medical care, ended up in crises, were then treated in hospital emergency departments and as inpatients, missed many days of school and so were held back, and therefore dropped out. Now, at Morris, that isn't happening anymore. That's a medical impact!”

Improving the mental health of teenagers who have been sexually abused is a priority for Jose Cárdenas, PsyD, a psychologist in the Teen Health Center at San Fernando (Calif) High School, a largely Hispanic school where he was once a student. Shortly after starting work in 1987, he discovered so many girls (and some boys) whose problems of suicide attempts, difficulty with peer relationships, and early pregnancy (or paternity) stemmed from prior sexual abuse that he set up therapy groups in English and Spanish.

Cárdenas, like other physicians at SBCs, says, “This sort of thing happens much more frequently than we want to believe. You learn about it only when

you are open to the possibility and develop a relationship of trust with the students you are caring for.”

In the groups he leads, students spend at least one academic year, in once-a-week and some private sessions, learning to deal with their psychic trauma. “Most of the parents don't know they're in therapy,” he says; “many of them couldn't handle it.”

In most cases the offender is no longer in the home; if he or she is, appropriate steps are taken through government agencies. The goal of therapy is to have students realize that they are not “damaged goods,” so they will not remain lifelong potential “victims” with all the further misery that usually entails. Cárdenas says that while his work is far from easy, the results are encouraging.

The physicians emphasize, however, that not all their tasks are onerous. Providing routine physical examinations that make students eligible for employment or athletic competition is one of their responsibilities. It might not seem that important, but if they were not there to do it, it probably would not get done—and another door to full participation in American life would be shut on poor youngsters.

David Kaplan, MD, chief of adolescent medicine at the University of Colorado School of Medicine in Denver, for example, mentions that before clinics were opened in three of that city's nine high schools, one third of the girls who wanted to go out for volleyball teams couldn't play because they could not get the examinations.

A Different Approach

Kaplan says the impetus to establish the school health programs in Denver 3 years ago came from “seeing a real increase in the morbidity that adolescents have in our society. It seemed that we had to develop a different approach if we were to intervene significantly.” He points out that, in Denver at least, “the kinds of problems that are seriously jeopardizing kids are not serious medical problems in the strictest sense—they don't have a life-threatening illness that is going to interfere with their future productivity.”

However, he adds, “It's not unusual for us to find a teenager who comes into the SBC and, finally, the fact will come out that he's been kicked out of the house, for any of a number of reasons, and has been moving around from one friend's house to another for 2 weeks. It's hard for a kid like that to think about his future in a way that makes him want to stay in school and graduate. We try to help them with that.”

One hopeful statistic has emerged

from the program's approach to alcohol and drug problems. A Denver school policy provides that students caught using or dealing drugs be suspended and, says Kaplan, “these are usually marginal students to start with.” The SBCs initiated a system whereby students and parents write a contract with the school agreeing that, in order to stay in school, the student will join a compulsory treatment program.

“Through that program, we were able to reduce suspensions in the schools by 80% in the first year of operation. We found, too, that the kids stayed involved in the program beyond the compulsory period. That's one real good example of how education and health care can interact,” Kaplan says.

A serendipitous result of having the professionals who staff the clinics interact regularly with students is their effectiveness as positive role models. Kaplan says he knows of at least three students who have gone into nursing “because of getting involved in the program and having their lives touched by one of the staff members.”

Approximately 70% of the students are enrolled in the three clinics. Last year more than 4000 visits were logged for 1600 students. Kaplan estimates that some 25% of the students in each school are without any form of health insurance and, since about 15% of Denverites are covered by Medicaid, “we think about half of the students are right on the edge in terms of having inadequate resources for medical care.”

“It's a tremendously exciting program,” Kaplan says. “The fact that we have such high utilization from the student body tells me that we're doing something right—if we weren't meeting the needs of the students, they wouldn't be coming in.”

More Than Reproductive Health

Students have been coming into SBCs in St Paul, Minn, since 1973. According to the Center for Population Options, a New York-based nonprofit organization that keeps tabs on adolescent health and reproduction issues, it was not only one of the earliest such facilities (the first opened in Dallas, Tex, in 1970), but also the first comprehensive school-based health clinic that offered family planning counseling services. The five clinics, which continue to be allied with St Paul-Ramsey Medical Center, are managed by a local nonprofit organization called Health Start, according to its executive director, Donna Zimmerman, MPH.

Unlike most SBCs, those in St Paul care for an across-the-board array of patients, says Zimmerman, thanks to

the open enrollment policy that allows students to attend any of the city's six high schools. This makes for a clinic clientele at each school that includes those from the upper-middle class to the poor. In fact, she says, at Highland Park High School in St Paul's richest neighborhood, the only one that has no clinic, parents and teachers are working to get one because of a growing need.

Health education aimed at disease prevention has a high priority. Zimmerman says many of the clinic staff speak to classes about a wide variety of physical and mental health issues.

The topics include nutrition, smoking-associated health problems, risk assessment regarding the acquired immunodeficiency syndrome (AIDS), and education about other sexually transmitted diseases. There are also small group get-togethers devoted to such topics as raising self-esteem and support for teenaged parents.

"While the issue of teenage pregnancy is still a major effort," Zimmerman says, "the centers have evolved into much more than a reproductive health clinic." She says the clinics see "an awful lot of students who have been victims of physical and/or sexual child abuse or some kind of family violence," and appropriately trained professionals provide counseling to them. During the last few years, she says, the clinics' staffs have seen a steep rise in the incidence of sexually transmitted diseases.

Consequently, there is much emphasis on "teaching kids how to be safe about sexual activity and certainly encouraging the use of condoms." The clinics do not distribute them, says Zimmerman. However, "students have access to a number of neighborhood clinics where they can go to pick up birth control supplies or condoms free of charge. That's part of the benefit of being a Health Start patient."

The variety of funding on which the St Paul clinics depend is fairly similar to that of many others. First, says Zimmerman, "we are as aggressive as we can be about recouping medical assistance [Medicaid] or other third-party reimbursement, if at all possible." Then there is a temporary grant from the Robert Wood Johnson Foundation, some money from the Children's Trust Fund (for counseling to prevent child abuse by teenaged parents), federal funding through the Department of Corrections (for counseling students who are themselves victims of criminal child abuse), and federal Maternal and Child Health block grant money that is distributed by the city. Some local foundations and corporations also donate money to the clinics in St Paul and simi-

lar ones in Minneapolis.

Zimmerman estimates that the clinics see as many as half the students during any school year, and "that might be anything from a student who comes in for a throat culture to one who has received all her prenatal care." About 40%, she says, are students without any health care insurance and another 25% have medical assistance, "so I think we are reaching a group of students who might not get health care in any other setting if they did not have the school-based clinic."

An Urgent Need—A General Trend?

Galland in Baton Rouge and her colleague John Howe, MD, who directs the clinic at Istrouma High School in that city, agree. They say, "The clinics are important because the problem we most encounter is that the students haven't gotten access to health care elsewhere."

While they dispense medical care for illnesses ranging from the common cold to systemic lupus erythematosus, says Galland—and even referred for successful surgery a student with coarctation of the aorta—the provision of health education sometimes can be problematic. She said she finds it "ridiculous," for example, that the state-approved curriculum for AIDS education "is not allowed to mention the word *condom*."

An intriguing finding, however, is that when the word is spoken—licitly—in the context of "safe sex" and prevention of sexually transmitted diseases, it seems to affect the rate of adolescent pregnancy. Galland explains that, although it is illegal to counsel about or dispense contraception in Louisiana schools, following "a rash of STDs at the high school level after Christmas" a talk on prevention was given to the entire student body of Istrouma High. "To our amazement," she says, "I just learned that our pregnancy rate seems to be down 35% from last year."

Galland is careful to claim no unearned credit; she says another reason for the drop may be newly efficient networking with local service agencies that offer counseling to victims of rape and incest and for other sexual issues.

"Our best statistic"—Galland fairly crows—"and a real hotdog statistic it is, is that through this networking and through a consistency of care, our percentage of low-birth-weight infants born to high school girls went from 50% of babies 2 years ago to 0% this year."

She credits this to the efforts of a "low-key, very accepting nurse practitioner" whom the students readily ask to perform a pregnancy test whenever they miss a period.

"If they're positive," Galland says,

"she immediately refers them to the Teen Advocacy Program (the social service agency we work with), and then they immediately hook up with the nurse midwife program at the local public hospital, and they immediately begin good prenatal care with close, ongoing follow-up at school, at home through the social worker, and at the hospital." The physician says, "I have to believe we've made a big difference here. After all, everybody agrees good prenatal care does tend to help."

(Galland is circumspect regarding the abortion option. No mention of this is allowed in Louisiana schools, and if pregnant high schoolers hear about it elsewhere, she prefers not to know.)

The day after her interview with JAMA, Galland said, she and others planned to present the SBC concept to the Louisiana House of Representatives' Health and Welfare Committee, because the Office of Public Health in the state capital is so enthusiastic about the programs now in Baton Rouge and New Orleans (a third one is planned for Shreveport). In Louisiana, she says, lack of access to medical care is not an issue of race so much as one of poverty.

The majority of students at Westdale and Istrouma come from one-parent families, she says, and are "medically indigent. Their primary problem is neglect."

"There's a real move in middle school and high school education to do more linking of education and health services, especially where this is the only place students can receive care," Galland says. "It seems to be a general trend."

Does anyone oppose this trend? Once their purpose is explained to students' parents, those who were interviewed for this story all agreed, and community concerns about adherence to local mores are adequately addressed, support for school-based health centers seems to blossom.

What about their impact on private medical practice? The Johnson Foundation's Lear says, "The only opposition you hear is philosophic or religious, not from physicians. Many organized physicians' groups, including the American Medical Association, support their continued development—and doctors have never been shrinking violets when they have felt that someone might be attacking their pocketbook."

"My hypothesis is that school-based health centers have not provoked concern on the part of physicians in private practice because they are being developed in communities that just are not being served by individual providers. Nobody's losing nothing!"

—by Marsha F. Goldsmith

*Treat
hypertension
at its source
with...*



NEW, ONCE-A-DAY

CARDURA[®]



(doxazosin mesylate)

Scored Tablets
1 mg, 2 mg, 4 mg, 8 mg

Please see brief summary of prescribing information on last page of this advertisement.

NEW, ONCE-A-DAY CARDURA® (doxazosin mesylate)

Scored Tablets
1 mg 2 mg 4 mg 8 mg

Convenient once-a-day dosage

Most responsive patients are controlled with one daily dose of 4 to 8 mg²

—recommended initial dose is 1 mg, with dosage range of 1 mg to 16 mg per day.

References: 1. Weiner N. Drugs that inhibit adrenergic nerves and block adrenergic receptors. In Goodman and Gilman, eds. *The Pharmacological Basis of Therapeutics*, ed 7. New York, NY: Macmillan Publishing Company, 1985, pp 181-214, 887-907. 2. Data available on request from Roerig. 3. Talselt L. Long-term comparison of doxazosin and atenolol in patients with mild or moderate essential hypertension. abstract. Presented at a scientific exhibit at a program entitled *Management of Coronary Heart Disease Risk Factors in Hypertensive Patients: Clinical Experience with Doxazosin*. London, UK, January 26, 1990, pp 18-19. 4. Scheen AJ, Castillo M, Salvatore T, et al. Lack of deleterious effects of the alpha₁-adrenoceptor blocking agent doxazosin on insulin secretion and insulin sensitivity in healthy men. *Current Therapeutic Research* 1989; 46: 200-209. 5. Wilner KD, Ziegler MG. Effects of alpha₁ inhibition on renal blood flow and sympathetic nervous activity in systemic hypertension. *Am J Cardiol* 1987; 59: 82G-86G.

CARDURA® (doxazosin mesylate) Tablets Brief Summary of Prescribing Information INDICATIONS AND USAGE

CARDURA (doxazosin mesylate) is indicated for the treatment of hypertension. CARDURA may be used alone or in combination with diuretics or beta-adrenergic blocking agents. There is limited experience with CARDURA in combination with angiotensin converting enzyme inhibitors or calcium channel blockers.

CONTRAINDICATIONS

CARDURA is contraindicated in patients with a known sensitivity to quinazolinones (e.g., prazosin, terazosin).

WARNINGS

Syncope and "First-dose" Effect:

Doxazosin, like other alpha₁-adrenergic blocking agents, can cause marked hypotension, especially in the upright position, with syncope and other postural symptoms such as dizziness. Marked orthostatic effects are most common with the first dose but can also occur when there is a dosage increase, or if therapy is interrupted for more than a few days. To decrease the likelihood of excessive hypotension and syncope, it is essential that treatment be initiated with the 1 mg dose. The 2, 4, and 8 mg tablets are not for initial therapy. Dosage should then be adjusted slowly (see **DOSE AND ADMINISTRATION** section) with increases in dose every two weeks. Additional antihypertensive agents should be added with caution.

Patients being titrated with doxazosin should be cautioned to avoid situations where injury could result should syncope occur.

In an early investigational study of the safety and tolerance of increasing daily doses of doxazosin in normotensives beginning at 1 mg/day, only 2 of 6 subjects could tolerate more than 2 mg/day without experiencing symptomatic postural hypotension. In another study of 24 healthy normotensive male subjects receiving initial doses of 2 mg/day of doxazosin, seven (29%) of the subjects experienced symptomatic postural hypotension between 0.5 and 6 hours after the first dose necessitating termination of the study. In this study 2 of the normotensive subjects experienced syncope. Subsequent trials in hypertensive patients always began doxazosin dosing at 1 mg/day resulting in a 4% incidence of postural side effects at 1 mg/day with no cases of syncope.

In multiple dose clinical trials involving over 1500 patients with dose titration every one to two weeks, syncope was reported in 0.7% of patients. None of these events occurred at the starting dose of 1 mg and 1.2% (8/664) occurred at 16 mg/day.

If syncope occurs, the patient should be placed in a recumbent position and treated supportively as necessary.

PRECAUTIONS

General:

1. Orthostatic Hypotension:

While syncope is the most severe orthostatic effect of CARDURA, other symptoms of lowered blood pressure, such as dizziness, lightheadedness, or vertigo, can occur, especially at initiation of therapy or at the time of dose increases. These were common in clinical trials, occurring in up to 23% of all patients treated and causing discontinuation of therapy in about 2%.

In placebo controlled titration trials orthostatic effects were minimized by beginning therapy at 1 mg per day and titrating every two weeks to 2, 4, or 8 mg per day. There was an increased frequency of orthostatic effects in patients given 8 mg or more, 10%, compared to 5% at 1-4 mg and 3% in the placebo group.

Patients in occupations in which orthostatic hypotension could be dangerous should be treated with particular caution.

If hypotension occurs, the patient should be placed in the supine position and, if this measure is inadequate, volume expansion with intravenous fluids or vasopressor therapy may be used. A transient hypotensive response is not a contraindication to further doses of CARDURA.

2. Impaired liver function:

CARDURA should be administered with caution to patients with evidence of impaired hepatic function or to patients receiving drugs known to influence hepatic metabolism (see **CLINICAL PHARMACOLOGY**). There is no controlled clinical experience with CARDURA in patients with these conditions.

3. Leukopenia/Neutropenia:

Analysis of hematologic data from patients receiving CARDURA in controlled clinical trials showed that the mean WBC (N=474) and mean neutrophil counts (N=419) were decreased by 2.4% and 1.0% respectively, compared to placebo, a phenomenon seen with other alpha₁ blocking drugs. A search through a data base of 2400 patients revealed 4 in which drug-related neutropenia could not be ruled out. Two had a single low value on the last day of treatment. Two had stable, non-progressive neutrophil counts in the 1000/mm³ range over periods of 20 and 40 weeks. In cases where follow-up was available the WBCs and neutrophil counts returned to normal after discontinuation of CARDURA. No patients became symptomatic as a result of the low WBC or neutrophil counts.

Information for Patients:

Patients should be made aware of the possibility of syncope and orthostatic symptoms, especially at the initiation of therapy, and urged to avoid driving or hazardous tasks for 24 hours after the first dose, after a dosage increase, and after interruption of therapy when treatment is resumed. They should be cautioned to avoid situations where injury could result should syncope occur during initiation of doxazosin therapy. They should also be advised of the need to sit or lie down when symptoms of lowered blood pressure occur, although these symptoms are not always orthostatic, and to be careful when rising from a sitting or lying position. If

1 Begin all patients with CARDURA 1 mg once daily to minimize side effects. Evaluate supine and standing blood pressure. Prescribe CARDURA 2 mg once daily, if necessary.



2 Evaluate for blood pressure control. Prescribe 4 mg once daily, if necessary.



3 Evaluate for blood pressure control. Prescribe 8 mg once daily, if necessary. Maximum recommended dosage is 16 mg once daily.



dizziness, lightheadedness, or palpitations are bothersome they should be reported to the physician, so that dose adjustment can be considered. Patients should also be told that drowsiness or somnolence can occur with doxazosin, requiring caution in people who must drive or operate heavy machinery.

Drug Interactions:

Most (96%) of plasma doxazosin is protein bound. *In vitro* data in human plasma indicate that CARDURA has no effect on protein binding of digoxin, warfarin, phenytoin or indomethacin. There is no information on the effect of other highly plasma protein bound drugs on doxazosin binding. CARDURA has been administered without any evidence of an adverse drug interaction to patients receiving thiazide diuretics, beta blocking agents, and nonsteroidal anti-inflammatory drugs.

Drug/Laboratory test interactions:

None known.

Cardiac Toxicity in Animals:

An increased incidence of myocardial necrosis or fibrosis was displayed by Sprague-Dawley rats after 6 months of dietary administration at concentrations calculated to provide 80 mg doxazosin/kg/day and after 12 months of dietary administration at concentrations calculated to provide 40 mg doxazosin/kg/day (150 times the maximum recommended human dose assuming a patient weight of 60 kg). There is no evidence that similar lesions occur in humans.

Carcinogenesis, Mutagenesis and Impairment of Fertility:

Chronic dietary administration (up to 24 months) of doxazosin mesylate at maximally tolerated concentrations (highest dose 40 mg/kg, about 150 times the maximum recommended human dose of 16 mg/60 kg) revealed no evidence of carcinogenicity in rats. There was also no evidence of carcinogenicity in a similarly conducted study (up to 18 months of dietary administration) in mice. The mouse study, however, was compromised by the failure to use a maximally tolerated dose of doxazosin.

Mutagenicity studies revealed no drug- or metabolite-related effects at either chromosomal or subchromosomal levels.

Studies in rats showed reduced fertility in males treated with doxazosin at oral doses of 20 (but not 5 or 10) mg/kg/day, about 75 times the maximum recommended human dose. This effect was reversible within two weeks of drug withdrawal.

Pregnancy

Teratogenic Effects, Pregnancy Category B. Studies in rabbits and rats at daily oral doses of up to 40 and 20 mg/kg, respectively (150 and 75 times the maximum recommended daily dose of 16 mg, assuming a patient weight of 60 kg), have revealed no evidence of harm to the fetus. The rabbit study, however, was compromised by the failure to use a maximally tolerated dose of doxazosin. There are no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, CARDURA should be used during pregnancy only if clearly needed.

Radioactivity was found to cross the placenta following oral administration of labeled doxazosin to pregnant rats.

Neonatal Effects. In peri-postnatal studies in rats, postnatal development at maternal doses of 40 or 50 mg/kg/day of doxazosin was delayed as evidenced by slower body weight gain and a slightly later appearance of anatomical features and reflexes.

Nursing Mothers

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when CARDURA is administered to a nursing mother.

Pediatric Use

Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

CARDURA has been administered to approximately 4000 patients, of whom 1679 were included in the clinical development program. In that program, minor adverse effects were frequent, but led to discontinuation of treatment in only 7% of patients. In placebo-controlled studies adverse effects occurred in 48% and 40% of patients in the doxazosin and placebo groups, respectively, and led to discontinuation in 2% of patients in each group. The major reasons for discontinuation were postural effects (2%), edema, malaise/fatigue, and some heart rate disturbance, each about 0.7%.

In controlled clinical trials directly comparing CARDURA to placebo there was no significant difference in the incidence of side effects, except for dizziness (including postural), weight gain, somnolence and fatigue/malaise. Postural effects and edema appeared to be dose related.

The prevalence rates presented below are based on combined data from placebo-controlled studies involving once daily administration of doxazosin at doses ranging from 1-16 mg. Table 1 summarizes those adverse experiences (possibly/probably related) reported for patients in these studies where the prevalence rate in the doxazosin group was at least 0.5% or where the reaction is of particular interest.

TABLE 1 ADVERSE REACTIONS DURING PLACEBO CONTROLLED STUDIES

	DOXAZOSIN (N=339)	PLACEBO (N=336)
CARDIOVASCULAR		
Dizziness	19%	9%
Vertigo	2%	1%
Postural Hypotension	0.3%	0%
Edema	4%	3%
Palpitation	2%	0%
Arrhythmia	1%	0%
Hypertension	1%	0%
Tachycardia	0.3%	1%
Peripheral Ischemia	0.3%	0%
SKIN APPENDAGES		
Rash	1%	1%
Pruritus	1%	1%
MUSCULOSKELETAL		
Arthralgia/Arthritis	1%	0%
Muscle Weakness	1%	0%
Myalgia	1%	0%
CENTRAL & PERIPHERAL N.S.		
Headache	14%	16%
Paresthesia	1%	1%

	DOXAZOSIN (N=339)	PLACEBO (N=336)
	Kinetic Disorders	1% 0%
	Ataxia	1% 0%
	Hypertonia	1% 0%
	Muscle Cramps	1% 0%
AUTONOMIC	Mouth Dry	2% 2%
	Flushing	1% 0%
SPECIAL SENSES	Vision Abnormal	2% 1%
	Conjunctivitis/Eye Pain	1% 1%
	Tinnitus	1% 0.3%
PSYCHIATRIC	Somnolence	5% 1%
	Nervousness	2% 2%
	Depression	1% 1%
	Insomnia	1% 1%
	Sexual Dysfunction	2% 1%
GASTROINTESTINAL	Nausea	3% 4%
	Diarrhea	2% 3%
	Constipation	1% 1%
	Dyspepsia	1% 1%
	Flatulence	1% 1%
	Abdominal Pain	0% 2%
	Vomiting	0% 1%
RESPIRATORY	Rhinitis	3% 1%
	Dyspnea	1% 1%
	Epistaxis	1% 0%
URINARY	Polyuria	2% 0%
	Urinary Incontinence	1% 0%
	Micturition Frequency	0% 2%
GENERAL	Fatigue/Malaise	12% 6%
	Chest Pain	2% 2%
	Asthenia	1% 1%
	Face Edema	1% 0%
	Pain	2% 2%

Additional adverse reactions have been reported, but these are, in general, not distinguishable from symptoms that might have occurred in the absence of exposure to doxazosin. The following adverse reactions occurred with a frequency of between 0.5% and 1%: syncope, hypospasm, increased sweating, agitation, increased weight. The following additional adverse reactions were reported by <0.5% of 3960 patients who received doxazosin in controlled or open, short- or long-term clinical studies, including interventional studies: *Cardiovascular System:* angina pectoris, myocardial infarction, cerebrovascular accident; *Autonomic Nervous System:* pallor; *Metabolic:* thirst, gout, hypokalemia; *Hematopoietic:* lymphadenopathy, purpura; *Reproductive System:* breast pain; *Skin Disorders:* alopecia, dry skin, eczema; *Central Nervous System:* paresis, tremor, twitching, confusion, migraine, impaired concentration; *Psychiatric:* paranoia, amnesia, emotional lability, abnormal thinking, depersonalization; *Special Senses:* parosmia, earache, taste perversion, photophobia, abnormal lacrimation; *Gastrointestinal System:* increased appetite, anorexia, fecal incontinence, gastroenteritis; *Respiratory System:* bronchospasm, sinusitis, coughing, pharyngitis; *Urinary System:* renal calculus; *General Body System:* not flashes, back pain, infection, fever/rigors, decreased weight, influenza-like symptoms.

CARDURA has not been associated with any clinically significant changes in routine biochemical tests. No clinically relevant adverse effects were noted on serum potassium, serum glucose, uric acid, blood urea nitrogen, creatinine or liver function tests. CARDURA has been associated with decreases in white blood cell counts (See Precautions).

OVERDOSSAGE

The oral LD₅₀ of doxazosin is greater than 1000 mg/kg in mice and rats. The most likely manifestation of overdosage would be hypotension, for which the usual treatment would be intravenous infusion of fluid. As doxazosin is highly protein bound, dialysis would not be indicated.

DOSE AND ADMINISTRATION

DOXAZOSIN MUST BE INDIVIDUALIZED. The initial dosage of CARDURA in hypertensive patients is 1 mg given once daily. Depending on the individual patient's standing blood pressure response (based on measurements taken at 2-6 hours postdose and 24 hours postdose), dosage may then be increased to 2 mg and thereafter if necessary to 4 mg, 8 mg and 16 mg to achieve the desired reduction in blood pressure. Increases in dose beyond 4 mg increase the likelihood of excessive postural effects including syncope, postural dizziness/vertigo, postural hypotension. At a titrated dose of 16 mg once daily the frequency of postural effects is about 12% compared to 3% for placebo.

HOW SUPPLIED

CARDURA (doxazosin mesylate) is available as colored tablets for oral administration. Each tablet contains doxazosin mesylate equivalent to 1 mg (white), 2 mg (yellow), 4 mg (orange) or 8 mg (green) of the active constituent, doxazosin. CARDURA® TABLETS are available as 100, 1 mg (NDC 0049-2750-66), 2 mg (NDC 0049-2760-66), 4 mg (NDC 0049-2770-66), 8 mg (NDC 0049-2780-66). Recommended storage: Store below 86°F (30°C).

CAUTION: Federal law prohibits dispensing without prescription.

65-4538-00-0

Issued Nov. 1990



Roerig

A division of Pfizer Pharmaceuticals

From the Health Care Financing Administration

Recent Medicaid Expansions: The 1990 Budget Reconciliation Act contains several provisions that expand eligibility to the Medicaid program. Medicaid, which is jointly financed by federal and state governments, provides health care for about 26 million poor, disabled, and elderly Americans.

Despite a climate of fiscal restraint, the legislation broadens the health care safety net to cover more poor children. The expanded Medicaid eligibility includes children up to 19 years of age in families with incomes at or below the federal poverty level. This expansion builds on the current requirement to provide Medicaid coverage for children up to 6 years of age in families with incomes at or below 133% of the federal poverty level. The new provision will be phased in over a 10-year period, beginning July 1, 1991.

The law also requires states to make efforts to inform mothers and pregnant women that they and their children may be eligible for Medicaid. States must make simplified application forms available outside of welfare offices and at other locations, such as hospitals serving large numbers of the poor and federally qualified health centers.

The 1990 Budget Reconciliation Act also:

- Requires continuous Medicaid eligibility for 1 year for all infants who are born to Medicaid-eligible women;
- Bolsters an existing program that helps certain poor elderly individuals pay Part B of Medicare's annual deductible and monthly premiums for physician services;
- Creates a new optional program to provide home care for frail and disabled senior citizens; and
- Allows state Medicaid programs to finance community-based living arrangements for the mentally retarded.

Created in 1965 under legislation aimed at helping states provide health care for the poor, the Medicaid program grew quickly in its first decade. During the 1970s, Medicaid expenditures continued to rise rapidly as the program began financing nursing home care and institutional care for the mentally retarded.

During the early 1980s, lawmakers tried to limit both Medicaid spending and eligibility. Since 1984, however, Congress has tried to hold down costs while gradually expanding the program, especially with regard to children

and pregnant women.

About 70% of Medicaid funds now are spent on health care services and long-term care for the elderly, blind, and disabled. Mothers and dependent children constitute about three fourths of Medicaid recipients, but account for about one fourth of the program's expenditures.

Many challenges remain. While state Medicaid programs do not cover everyone below the poverty level, Medicaid costs continue to mount. In 1989, total Medicaid benefit payments exceeded \$58 billion, with the federal government footing about \$32 billion of the bill. Medicaid is consuming increasingly larger portions of state budgets and was the second largest state spending category in fiscal year 1990.

Some states will have difficulty financing the recent Medicaid expansions. The expansions mandated by the budget acts of 1989 and 1990 alone are expected to increase federal and state spending by \$6 billion over the next 5 years by extending eligibility to several million children and pregnant women.

Meanwhile, several high-level commissions and task forces have been studying how to improve access for the more than 33 million Americans who lack health insurance, how to control health care cost inflation, and how to ensure high-quality health care.

President Bush and Secretary Sullivan of the US Department of Health and Human Services have emphasized that addressing these issues is a top priority. The US Department of Health and Human Services Task Force on the Uninsured and Long-Term Care is preparing recommendations on how to address the nation's health care needs in a way that is fiscally responsible.

The problems are technically complex and politically volatile, and many of the solutions considered so far would be very expensive to implement. It is no surprise that Americans have yet to reach consensus on how health care reform should take shape. In the absence of systemwide reform, incremental improvements to the health care safety net, such as the Medicaid provisions just enacted, can offer help to people needing it the most.

The Bush administration is particularly interested in commonsense approaches to expanding access to health care for children and pregnant women. The Health Care Financing Administration (HCFA) has been encouraging

states to adopt Medicaid options that are available for maternal and child health programs.

Under the 1989 budget act, HCFA will award a total of \$30 million over 3 years to three states—Michigan, Maine, and Florida—for innovative projects designed to extend services to indigent children and pregnant women who are younger than 20 years who currently are not eligible for Medicaid.

The 1990 budget act authorizes \$40 million over 3 years for demonstrations in up to four states to test extending Medicaid eligibility to some families and lower-income working people who are currently ineligible. Other awards totaling \$5.6 million in up to five states will help coordinate the substance abuse treatment and prenatal care of pregnant women who abuse drugs.

Improving the Medicaid program is a top priority for HCFA. Earlier this year, HCFA created a separate Medicaid Bureau, which will facilitate HCFA's coordination with state Medicaid agencies.

As a nation, the more we can buy with each dollar (while preserving high-quality health care), the easier it will be to expand access to the health care system. The 1990 budget act brings the taxpayers better value by requiring drug manufacturers to offer discounts to state Medicaid programs. The rebates will put state Medicaid programs on a more equal footing with other large-scale prescription drug buyers. The almost \$2 billion that will be saved over 5 years through these rebates helped make it possible for legislators to support the Medicaid expansions.

Much remains to be done as Medicaid evolves to meet the changing needs of the American population. Government efforts to improve access to the program can succeed only with the support and participation of the nation's physicians. More than ever, HCFA is committed to working with the states and the physician community to ensure access to health care for our nation's most vulnerable citizens.

—by Gail R. Wilensky, PhD
Administrator
Health Care Financing
Administration

Editor's Note: Inquiries may be directed to Christine H. Nye, Director, Medicaid Bureau, HCFA, 6325 Security Blvd, Suite 200, East High Rise, Baltimore, MD 21207.



COMING SOON FROM BRISTOL-MYERS SQUIBB

A new direction toward



better lipid management

From the Health Resources and Services Administration

A Primary Care System for the Underserved: The US Department of Health and Human Services is promoting a new strategy to achieve better access to primary health care for underserved populations. It calls for the public and private sectors to join forces at the national, state, and local levels to develop and expand a more coordinated primary care system.

Two recent publications, *The Future of Public Health* (Institute of Medicine, Washington, DC: National Academy Press; 1988) and *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* (Washington, DC: US Dept of Health and Human Services; 1990), are the blueprints for this new approach.

The responsibility of the Health Resources and Services Administration (HRSA) within the Public Health Service is to assess, develop policies for, and assure the provision of primary care to the uninsured, underinsured, and underserved, and to encourage the public and private sectors to collaborate in that care. By using existing community-based, comprehensive models of care and expanded public and private resources, this mission can be accomplished. The challenge is to organize the current "patchwork quilt" of public and private primary care providers into a coordinated system designed with the underserved in mind.

HRSA's approach involves three different "cultures" that care for the underserved: primary care, public health, and health professions training institutions.

Comprehensive primary care should include not only the treatment of common illnesses and injuries, but also the delivery of preventive services. To reach the needy, this care should be community-based, family-centered, comprehensive, continuous, and accessible, regardless of an individual's ability to pay. A wide array of private and public providers deliver such services.

Comprehensive public health refers to preventive and primary care services that are provided through the coordinated efforts of state and/or local health departments, as well as through other public or private practitioners. Since the publication of the Institute of Medi-

cine's report, there has been increased interest in strengthening public health agencies to better address pressing problems such as human immunodeficiency virus (HIV) infection and infant mortality.

Health professions training institutions are crucial to the success of such services. Their students' involvement in the care of the underserved should start early in training and include experiences in primary care and public health facilities. This will encourage career choices that should help to alleviate the shortage of primary care and public health professionals in rural and inner-city areas.

For optimal patient care, these three cultures should share resources and coordinate services. Outstanding examples of cooperation are available. In Dade County, Fla, for example, the Primary Health Care Consortium brought together five federally funded community health centers, state and county primary care programs, the county health department, and a local teaching hospital. Working collaboratively, the consortium strengthens primary care delivery to the medically underserved by expanding care for patients in the local hospital, sharing specialty services and clinical equipment, using private physicians to fill in at the community health centers, and placing trainees and residents to obtain valuable experience and provide additional care.

A South Carolina Community Health Center, Beaufort-Jasper Comprehensive Health Services, is another example. With state maternal and child health funds, the center developed expanded, case-managed maternity care programs. Under contracts with state and local health departments, the center provides Medicaid screening and immunization services. Center personnel staff the local Women, Infants and Children food clinic. With local funds, the center supports care for indigents, school-based health programs, and environmental health projects.

The North Carolina Area Health Education Centers program is an example of academic coalition building. Students and residents from four medical schools, a public health school, and other institutions participate in a network

of nine multicounty area health education centers. Training occurs in primary care clinics, public health departments, nursing homes, and other community-based sites.

HRSA is building these strategies of coordination and cooperation into existing and new programs by supporting the following:

- The training of more minority health professionals.

- A targeted expansion of community and migrant health centers to deliver primary care services to people in rural and inner-city medically underserved areas.

- Better linkage of infant mortality, maternal and child health, HIV and acquired immunodeficiency syndrome (AIDS), and other categorical public health grants to primary care and academic entities.

- A large expansion of the National Health Service Corps to increase the supply of health professionals in areas with shortages.

- Linkage of health professions training grants to primary care practice in underserved areas.

- A closer working relationship among primary care, public health, and Medicaid programs to encourage early Medicaid enrollment by eligible individuals. This includes implementing cost-based Medicaid reimbursement for community-based health clinics under new "Federally Qualified Health Center" legislation.

In its recent response to the Institute of Medicine's report, the American Medical Association endorsed a stronger linkage between medical and public health practice. The challenge to HRSA—and the physician community—is to fill the gaps in the health system so that the underserved gain access to the benefits of comprehensive public health and primary care.

—by Robert G. Harmon, MD, MPH
Administrator
Health Resources and
Services Administration

Editor's Note: Inquiries may be directed to Sylvia W. Shaffer, Associate Administrator for Communications, HRSA, Room 14-43, 5600 Fishers Ln, Rockville, MD 20857; telephone (301) 443-2086.

A BRIGHT IDEA TO START WITH IN MILD HYPERTENSION



ONCE
DAILY **180mg**
Calan[®] SR
(verapamil HCl) 180 mg
SUSTAINED-RELEASE CAPLETS

FEELING GOOD WITH MILD HYPERTENSION

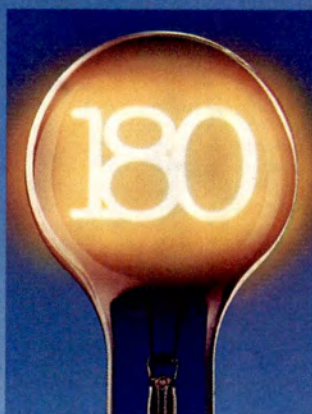


- HIGH SINGLE-AGENT EFFICACY^{1*}
- LOW INCIDENCE OF SIDE EFFECTS^{1†}
- UNIMPAIRED QUALITY OF LIFE SHOWN IN THREE CLINICAL STUDIES²⁻⁴

* As determined in clinical studies with dosages titrated up to 360 or 480 mg daily. Total daily dosages above 240 mg were and should be administered in divided doses. Calan SR should be administered with food.

† Constipation, which is easily managed in most patients, is the most commonly reported side effect of Calan SR. Please see last page of this advertisement for references and a brief summary of prescribing information.

LD



ONCE
DAILY **180mg**
Calan[®] SR
(verapamil HCl) 180 mg
SUSTAINED-RELEASE CAPLETS

SEARLE

A BRIGHT IDEA TO STAY WITH IN MILD HYPERTENSION



ONCE DAILY **180mg**
Calan[®] SR
Verapamil HCl
SUSTAINED-RELEASE CAPLETS

- Single-agent efficacy... with once-daily dosing
- Low incidence of side effects
- Scored caplet provides easy titration

References:

1. Data on file, G.D. Searle & Co. 2. Palmer A, Fletcher A, Hamilton G, et al: A comparison of verapamil and nifedipine on quality of life. *Br J Clin Pharmacol* 1990;30:365-370. 3. Fletcher AE, Chester PC, Hawkins CMA, et al: The effects of verapamil and propranolol on quality of life in hypertension. *J Hum Hypertens* 1989;3:125-130. 4. Croog SH, Kong BW, Levine S, et al: Hypertensive black men and women: Quality of life and effects of antihypertensive medications. *Arch Intern Med* 1990;150:1733-1741.

BRIEF SUMMARY

Contraindications: Severe LV dysfunction (see **Warnings**), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol clearance may occur with combined use. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-

Calan SR 180-mg
caplets are scored
for easy titration.



lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

Adverse Reactions: Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°, 2°, 3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, increased urination, spotty menstruation, impotence.

12/21/89 • P90-W198V

Address medical inquiries to:
G.D. Searle & Co.
Medical & Scientific
Information Department
4901 Searle Parkway
Skokie, IL 60077

SEARLE

G.D. Searle & Co.
Box 5110, Chicago, IL 60680

DATA UPDATE:
THE
EXPERIENCE
BUILDS.

Scanning electron micrograph of
neutrophil engulfing *Candida*
albicans. Both neutrophils and
macrophages are responsible for
phagocytosis of invading *Candida*
albicans.

Diffucan[®] ONCE-A-DAY ORAL
IV
(*fluconazole*)
100 mg, 200 mg tablets / 200 mg, 400 mg IV Injection

Please see brief summary of prescribing information on last page of this advertisement.

A scanning electron micrograph showing several large, spherical, blue-stained cells (neutrophils) with a granular surface. These cells are surrounded by and appear to be engulfing smaller, irregular, yellowish-brown structures (Candida albicans). The background is dark and textured with some fibrous or branching structures.

E

FFECTIVELY TREATS MUCOSAL & SYSTEMIC FUNGAL INFECTIONS WITH FEW SAFETY CONCERNS

Neutrophil phagocytoses *Candida albicans*.

*Due to the interim nature of these results, statistics are not provided. Results of multicenter, open-label, randomized clinical trial using Diflucan 100 mg/day for 7 days; clotrimazole 50 mg/day for 14 days. Results reflect clinical cure and improvement.

†Due to the interim nature of these results, statistics are not provided. Endoscopic cure results of a double-blinded, randomized trial comparing Diflucan 100 to 200 mg/day; ketoconazole 200 to 400 mg/day.

‡Open-label trial. Diflucan 100 to 200 mg/day.

§Due to the interim nature of these results, statistics are not provided. Open-label, randomized trial. Clinical cure and improvement results. Diflucan 200 to 400 mg/day or amphotericin B 0.3 to 0.6 mg/kg/day.

¶Multicenter, comparative study. Results reflect successful maintenance without culture confirmed relapse and without toxicity necessitating treatment discontinuance as evaluated at a median of 258 days for Diflucan and 140 days for amphotericin B. Diflucan: 200 mg/day; amphotericin B: 1 mg/kg/week.

Provides excellent clinical success in oropharyngeal, esophageal, and systemic candidiasis, and cryptococcal meningitis:

MUCOSAL CANDIDIASIS			
OROPHARYNGEAL ^{1*}		ESOPHAGEAL ^{2†} (endoscopic cures)	
DIFLUCAN 80% CURED 16% IMPROVED	96% (205/214)	clotrimazole 64% CURED 14% IMPROVED	78% (71/91)
DIFLUCAN	89% (54/61)	ketoconazole	56% (36/64)
SYSTEMIC CANDIDIASIS			
CANDIDEMIA ^{3‡}	URINARY TRACT ^{3‡}	PERITONITIS ^{3‡}	DISSEMINATED ^{3‡}
DIFLUCAN 69% CURED 22% IMPROVED	91% (29/32)	DIFLUCAN 53% CURED 26% IMPROVED	79% (30/38)
DIFLUCAN	91% (32/35)	DIFLUCAN	71% (22/31)
DIFLUCAN	66% CURED 25% IMPROVED	DIFLUCAN	52% CURED 19% IMPROVED
CRYPTOCOCCAL MENINGITIS			
ACUTE THERAPY ^{3§}		MAINTENANCE TO PREVENT RELAPSE ⁴	
DIFLUCAN 26% CURED 32% IMPROVED	58% (54/93)	amphotericin B 26% CURED 29% IMPROVED	55% (32/58)
DIFLUCAN	92% (102/111)	amphotericin B	67% (52/78)
		<i>P</i> = 0.00001	

Excellent safety profile and patient compliance

In over 4,000 patients who received Diflucan for at least 7 days, the most common adverse events were nausea (3.7%), headaches (1.9%), and skin rash (1.8%).⁵

Rare incidents of serious hepatotoxicity has been reported, but the causal relationship to Diflucan is uncertain.⁵

Extensive penetration to key tissues, organs, and fluids

Distribution throughout the body approximates that of total body water after oral or IV dosing.⁵

Oral bioavailability of Diflucan >90% and unaffected by agents that increase gastric pH.³

ONCE-A-DAY
Diflucan[®] *ORAL*
(fluconazole) *IV*
100 mg, 200 mg Tablets / 200 mg, 400 mg IV Injection

**The Antifungal Effectiveness You Need.
The Safety You Want.**

Please see brief summary of prescribing information on last page of this advertisement.

**The Antifungal Effectiveness You Need.
The Safety You Want.**

Diflucan[®] *ONCE-A-DAY*
(fluconazole) *ORAL*
100 mg, 200 mg Tablets / 200 mg, 400 mg IV Injection



**WITH ONCE DAILY DOSING
FOR A WIDE RANGE OF
PATIENTS**

INDICATION	LOADING DOSE	DAILY THERAPY
OROPHARYNGEAL CANDIDIASIS	200 mg	100 mg
ESOPHAGEAL CANDIDIASIS	200 mg	100 mg*
SYSTEMIC CANDIDIASIS	400 mg	200 mg
CRYPTOCOCCAL MENINGITIS (acute)	400 mg	200 mg*
CRYPTOCOCCAL MENINGITIS (maintenance to prevent relapse)	200 mg	200 mg

*Doses of up to 400 mg/day may be used based on medical judgment of the patient's response to therapy.

References: 1. McCloskey R, Hathorn J, Buell D: Fluconazole (FLU) vs clotrimazole (CLO) treatment of oropharyngeal candidiasis in adults with malignancy. Presented at 30th Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, GA, October 24, 1990. 2. Laine L: Esophageal candidiasis in immunocompromised patients. Presented at a symposium entitled *Advances in the Management of Opportunistic Fungal Infections*, Atlanta, GA, October 21, 1990. 3. Data available on request from Roerig. 4. Powderly W, Saag M, Cloud G, et al: Fluconazole vs amphotericin B as maintenance therapy for prevention of relapse of AIDS-associated cryptococcal meningitis. Presented at 30th Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlanta, GA, October 24, 1990.

INDICATIONS AND USAGE

DIFLUCAN (fluconazole) is indicated for the treatment of:

- Oropharyngeal and esophageal candidiasis. DIFLUCAN is also effective for the treatment of serious systemic candidal infections, including urinary tract infection, peritonitis, and pneumonia.
 - Cryptococcal meningitis.
- Specimens for fungal culture and other relevant laboratory studies (serology, histopathology) should be obtained prior to therapy to isolate and identify causative organisms. Therapy may be instituted before the results of the cultures and other laboratory studies are known; however, once these results become available, anti-infective therapy should be adjusted accordingly.

CONTRAINDICATIONS

DIFLUCAN (fluconazole) is contraindicated in patients who have shown hypersensitivity to fluconazole or to any of its excipients. There is no information regarding cross hypersensitivity between fluconazole and other azole antifungal agents. Caution should be used in prescribing DIFLUCAN to patients with hypersensitivity to other azoles.

WARNINGS

Patients who develop abnormal liver function tests during DIFLUCAN therapy should be monitored for the development of more severe hepatic injury. Although serious hepatic reactions have been rare and the causal association with DIFLUCAN uncertain, if clinical signs and symptoms consistent with liver disease develop that may be attributable to fluconazole, DIFLUCAN should be discontinued. (See Adverse Reactions.) Immunocompromised patients who develop rashes during treatment with DIFLUCAN should be monitored closely and the drug discontinued if lesions progress. (See Adverse Reactions.)

PRECAUTIONS

Drug Interactions (See Clinical Pharmacology)
DIFLUCAN (fluconazole) increased the prothrombin time after warfarin administration. Careful monitoring of prothrombin time in patients receiving DIFLUCAN and coumarin-type anticoagulants is recommended.
DIFLUCAN increased the plasma concentrations of phenytoin. Careful monitoring of phenytoin concentrations in patients receiving DIFLUCAN and phenytoin is recommended.

DIFLUCAN has been infrequently associated with an increase in cyclosporine concentrations in renal transplant patients with or without impaired renal function. Careful monitoring of cyclosporine concentrations in patients receiving DIFLUCAN and cyclosporine is recommended.

DIFLUCAN increased the plasma concentrations and reduced the metabolism of tolbutamide, glyburide and glipizide. When DIFLUCAN is used concomitantly with these or other sulfonylurea oral hypoglycemic agents, blood glucose concentrations should be carefully monitored, and the dose of the sulfonylurea should be adjusted as necessary.

Rifampin enhances the metabolism of concurrently administered DIFLUCAN. Depending on clinical circumstances, consideration should be given to increasing the dose of DIFLUCAN when it is administered with rifampin. Physicians should be aware that drug-drug interaction studies with other medications have not been conducted, but such interactions may occur.

Carcinogenesis, Mutagenesis and Impairment of Fertility

Fluconazole showed no evidence of carcinogenic potential in mice and rats treated orally for 24 months at doses of 2.5, 5 or 10 mg/kg/day (approximately 2-7x the recommended human dose). Male rats treated with 5 and 10 mg/kg/day had an increased incidence of hepatocellular adenomas.

Fluconazole, with or without metabolic activation, was negative in tests for mutagenicity in 4 strains of *S. typhimurium*, and in the mouse lymphoma L5178Y system. Cytogenetic studies *in vivo* (murine bone marrow cells, following oral administration of fluconazole) and *in vitro* (human lymphocytes exposed to fluconazole at 1000 µg/mL) showed no evidence of chromosomal mutations.

Fluconazole did not affect the fertility of male or female rats treated orally with daily doses of 5, 10 or 20 mg/kg or with parenteral doses of 5, 25 or 75 mg/kg, although the onset of parturition was slightly delayed at 20 mg/kg p.o. In an intravenous perinatal study in rats at 5, 20 and 40 mg/kg, dystocia and prolongation of parturition were observed in a few dams at 20 mg/kg (approximately 5-15x the recommended human dose) and 40 mg/kg, but not at 5 mg/kg. The disturbances in parturition were reflected by a slight increase in the number of stillborn pups and decrease of neonatal survival at these dose levels. The effects on parturition in rats are consistent with the species specific estrogen-lowering property produced by high doses of fluconazole. Such a hormone change has not been observed in women treated with fluconazole. (See Clinical Pharmacology.)

Pregnancy

Teratogenic Effects. Pregnancy Category C: Fluconazole was administered orally to pregnant rabbits during organogenesis in two studies, at 5, 10 and 20 mg/kg and at 5, 25, and 75 mg/kg respectively. Maternal weight gain was impaired at all dose levels, and abortions occurred at 75 mg/kg (approximately 20-60x the recommended human dose); no adverse fetal effects were detected. In several studies in which pregnant rats were treated orally with fluconazole during organogenesis, maternal weight gain was impaired and placental weights were increased at 25 mg/kg. There were no fetal effects at 5 or 10 mg/kg; increases in fetal anatomical variants (supernumerary ribs, renal pelvis dilation) and delays in ossification were observed at 25 and 50 mg/kg and higher doses. At doses ranging from 80 mg/kg (approximately 20-60x the recommended human dose) to 320 mg/kg embryofetality in rats was increased and fetal abnormalities included wavy ribs, cleft palate and abnormal cranio-facial ossification. These effects are consistent with the inhibition of estrogen synthesis in rats and may be a result of known effects of lowered estrogen on pregnancy, organogenesis and parturition.

There are no adequate and well controlled studies in pregnant women. DIFLUCAN should be used in pregnancy only if the potential benefit justifies the possible risk to the fetus.

Nursing Mothers

It is not known whether fluconazole is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when DIFLUCAN is administered to a nursing woman.

Pediatric Use

Efficacy of DIFLUCAN has not been established in children. A small number of patients from age 3 to 13 years have been treated safely with DIFLUCAN using doses of 3-6 mg/kg daily.

ADVERSE REACTIONS

Sixteen percent of over 4000 patients treated with DIFLUCAN (fluconazole) in clinical trials of 7 days or more experienced adverse events. Treatment was discontinued in 1.5% of patients due to adverse clinical events and in 1.3% of patients due to laboratory test abnormalities.

In combined clinical trials and foreign marketing experience prior to U.S. marketing, patients with serious underlying disease (predominantly AIDS or malignancy) rarely have developed serious hepatic reactions or exfoliative skin disorders during treatment with DIFLUCAN (See Warnings). Two of these hepatic reactions and one exfoliative skin disorder (Stevens-Johnson syndrome) were associated with a fatal outcome. Because most of these patients were receiving multiple concomitant medications, including many known to be hepatotoxic or associated with exfoliative skin disorders, the causal association of these reactions with DIFLUCAN therapy is uncertain.

Clinical adverse events were reported more frequently in HIV infected patients (21%) than in non-HIV infected patients (13%); however, the patterns in HIV infected and non-HIV infected patients were similar. The proportions of patients discontinuing therapy due to clinical adverse events were similar in the two groups (1.5%). The following treatment-related clinical adverse events occurred at an incidence of 1% or greater in 4048 patients receiving DIFLUCAN for 7 or more days in clinical trials: nausea 3.7%, headache 1.9%, skin rash 1.8%, vomiting 1.7%, abdominal pain 1.7%, and diarrhea 1.5%.

In two comparative trials evaluating the efficacy of DIFLUCAN for the suppression of relapse of cryptococcal meningitis, a statistically significant increase was observed in median AST (SGOT) levels from a baseline value of 30 IU/L to 41 IU/L in one trial and 34 IU/L to 66 IU/L in the other. The overall rate of serum transaminase elevations of more than 8 times the upper limit of normal was approximately 1% in fluconazole-treated patients in clinical trials. These elevations occurred in patients with severe underlying disease, predominantly AIDS or malignancies, most of whom were receiving multiple concomitant medications, including many known to be hepatotoxic. The incidence of abnormally elevated serum transaminases was greater in patients taking DIFLUCAN concomitantly with one or more of the following medications: rifampin, phenytoin, isoniazid, valproic acid, or oral sulfonylurea hypoglycemic agents.

65-4526-00-0

Pfizer Roerig

Issued Jan 1990

© 1991 Pfizer Inc.

J AM GERIATR SOC

New York, NY

Public-Private Solution to Protection Against the Cost of Long-term Care

The demographics of our population and our current reliance on Medicaid with a means test that no one likes suggest the need for revising our financing of long-term care. Given that persons with Alzheimer's disease and related dementias are a substantial proportion of those needing long-term care, support for research to cure or control these problems should be part of a strategy for addressing the problem of long-term care. However, even if substantial progress is made, there is still a need for revising our method of financing long-term care. However, other pressing societal needs, such as reducing the \$2 trillion federal debt, addressing the needs of the growing number of children in poverty, and caring for the more than 30 million uninsured Americans, limit the role of the federal government in financing long-term care. A proposal to provide coverage for those with functional disabilities or cognitive impairment who need long-term home care and for the initial portion of nursing home stays within a social insurance program is outlined. More extensive coverage for nursing home stays would be provided for those with community-dwelling spouses. Major financing would be provided through a payroll tax or by a federal income tax for all age groups with supplementation from estate taxes or capital gains taxes at death. Improvement of benefits in the Medicaid program and an important role for private insurance in protecting the estates of those who become permanent nursing home residents are also suggested.

(1990;38:156-163) Robert M. Ball, 505 Capital Ct NE, #300, Washington, DC 20002.

ISR J MED SCI

Tel Aviv, Israel

Israel's Expenditure on Health Services

In 1986, the State of Israel used 7.6% of its gross national product (GNP) for health care. At first glance, this seems to be a reasonable level of expenditure when compared with the percentage of the GNP devoted to health care in eight selected industrialized noncommunist nations. However, Israel devoted fewer dollars per citizen to health care than any of the eight other nations. We investigated the role of three factors that contributed to this relatively low expenditure level: (1) health personnel and bed supply levels, (2) rates of operations and procedures, and (3) relative wage costs of health personnel. If Israel had the same level of per capita GNP as the United States, its annual health service per capita expenditure would increase from \$472 to \$1328. If, in addition, its health personnel received the same wage differentials (in relation to the average wage levels) as those received by health personnel in the United States, it is estimated that Israel would spend around \$1842 annually per capita on health care (representing 10.7% of its GNP). This figure is only \$98 less than what the United States spends, and creates a vastly different impression concerning the efficiency of the health system than does the original unadjusted expenditure of only \$472 per capita, which is \$1468 less than that spent by the United States. The Israeli health system can be said to be characterized by

adequate manpower inputs, high bed occupancy rates, low surgery rates relative to the United States (not necessarily a negative phenomenon), and low relative wage inputs. The relatively limited available output indicators lead us to believe that productivity per person employed in the health services could be raised. The low absolute levels of health expenditures in Israel are mainly due to a combination of a low GNP per capita and relatively low wage differentials between health service staff and other income earners.

(1990;26:625-629) G. Ginsberg et al, Department of Social Medicine, Hebrew University-Hadassah School of Public Health and Community Medicine, PO Box 1172, 91120 Jerusalem, Israel.

ARCH INTERN MED

Chicago, Ill

Health, Homelessness, and Poverty: A Study of Clinic Users

When seeking medical care, homeless persons often turn to health centers that were designed to treat the poor who have homes. To provide for effective medical care, personnel in such facilities need to know how the health care needs of the homeless are different from those of other clinic users. To compare the physical health of these two groups, we conducted a health survey and screening physical examination of 464 patients who attended the general adult and homeless clinic sessions of one of the main neighborhood health centers in Los Angeles County, California. As compared with the poor who have homes, homeless persons were more likely to have dermatological problems (32% vs 21%), functional limitations (median, 2 vs 0 per person), seizures (14% vs 6%), chronic obstructive pulmonary diseases (21% vs 12%), social isolation, serious vision problems (22% vs 12%), foot pain, and grossly decayed teeth (median, 1 vs 0 per person). We conclude that to care more optimally for homeless adults, health centers must pay attention to their functional disabilities, substance abuse, skin abnormalities, visual impairment, dental problems, and foot problems.

(1990;150:2325-2330) Lillian Gelberg et al, Division of Family Medicine, UCLA, Room 50-071 CHS, 10833 Le Conte Ave, Los Angeles, CA 90024-1683.

S AFR MED J

Cape Town, South Africa

Trends in the Distribution of South African Health Care Expenditure

The lack of critical distinction between the public and the private health sectors and what they represent has allowed the claim to be made that South African health care expenditure levels compare favorably with international standards. This study considers the distribution of health expenditure between the public and the private sectors, within these sectors, and on the basis of population group in South Africa. We highlight the extent of maldistribution of health care resources among the people of South Africa. The data analyzed in this article indicate that an increasing proportion of public sector expenditure has been spent on curative services, that the gap in real per capita expenditure between the "homelands" and other public sector departments has been widening, and that per capita expenditure has been increasing more rapidly in the private sector than in the public sector, particularly in the 1980s.

(1990;78:125-129) D. E. McIntyre et al, Health Economics Unit, Department of Community Health, University of Cape Town, Cape Town, South Africa.

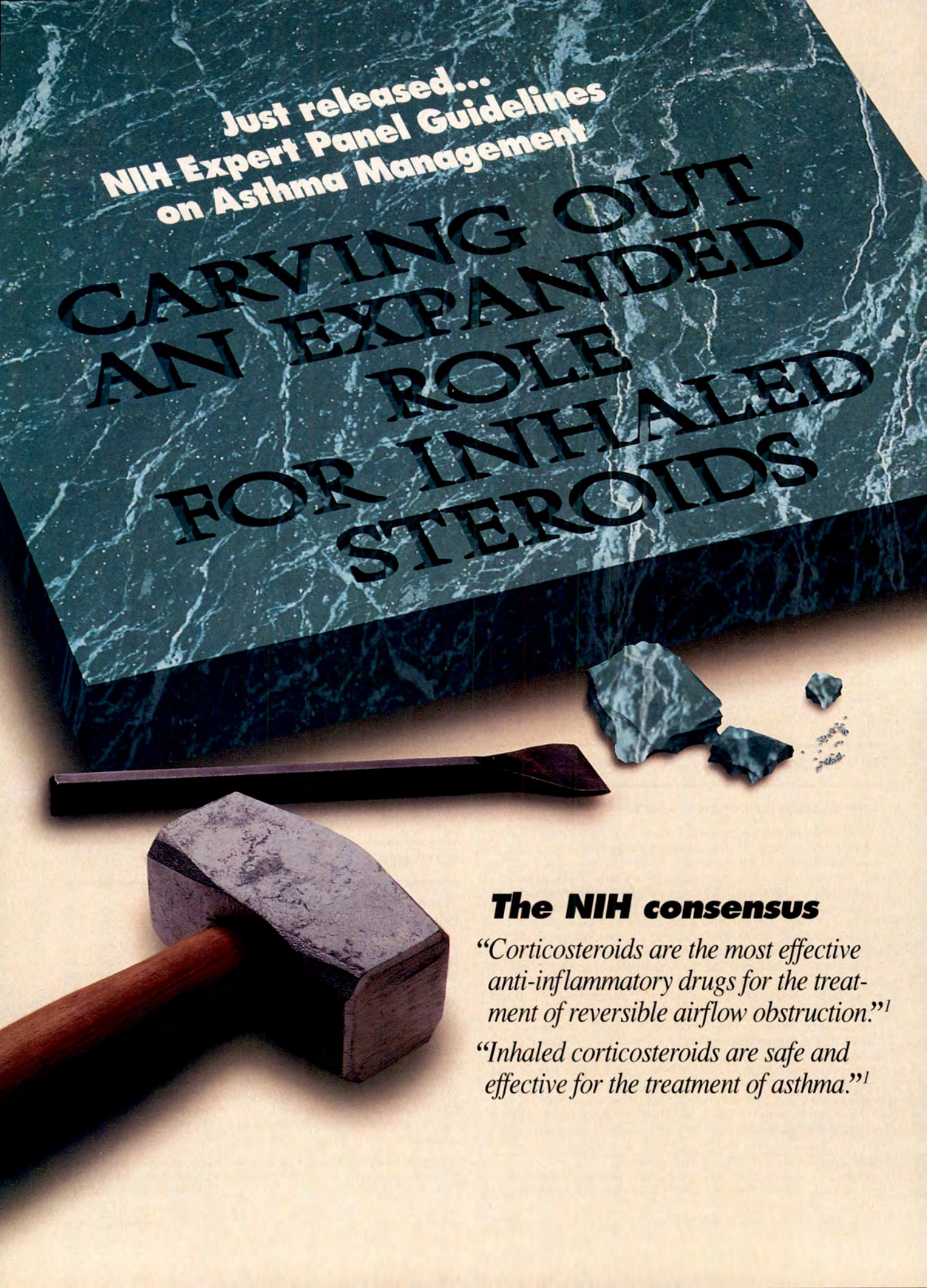
(Continued on p 2474.)

Edited by Carin M. Olson, MD, Contributing Editor.

Abstracts are selected on the basis of interest to our readers. Publication herein does not suggest an endorsement of content or a validation of conclusions.

Just released...
NIH Expert Panel Guidelines
on Asthma Management

CARVING OUT AN EXPANDED ROLE FOR INHALED STEROIDS



The NIH consensus

"Corticosteroids are the most effective anti-inflammatory drugs for the treatment of reversible airflow obstruction."¹

"Inhaled corticosteroids are safe and effective for the treatment of asthma."¹

The only one with 250 mcg per puff

High-dose 250 mcg/puff
AEROBID[®] (flunisolide)

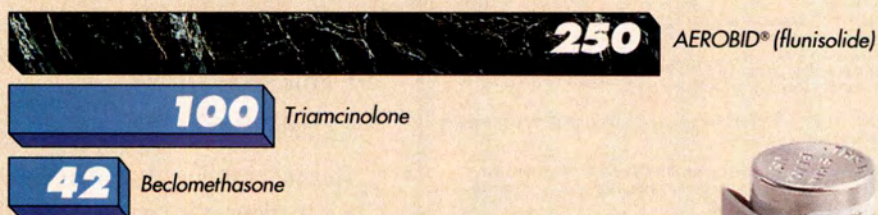
For Effective Control of Airway Inflammation

- **More mcg per puff**

AEROBID delivers 2.5 to 5 times as many mcgs per puff than those of the leading competitors.

AEROBID[®] vs competitive inhalers

Total mcg of inhaled steroid/puff²



- **More mcg per day**

The only inhaled steroid that provides 2000 mcg per day.

- **More convenient**

Fewer puffs per day and the only inhaled steroid that's always BID.



FOREST PHARMACEUTICALS, INC.
Subsidiary of Forest Laboratories, Inc.
St. Louis, Missouri 63043-9979

Please see accompanying brief summary which follows.

© 1991 Forest Pharmaceuticals, Inc.

AeroBid® (flunisolide)

Effective asthma control BID

For oral inhalation only

CONTRAINDICATIONS

AeroBid Inhaler is contraindicated in the primary treatment of status asthmaticus or other acute episodes of asthma where intensive measures are required.

Hypersensitivity to any of the ingredients of this preparation contraindicates its use.

WARNINGS

Particular care is needed in patients who are transferred from systemically active corticosteroids to AeroBid Inhaler because deaths due to adrenal insufficiency have occurred in asthmatic patients during and after transfer from systemic corticosteroids to aerosol corticosteroids. After withdrawal from systemic corticosteroids, a number of months are required for recovery of hypothalamic-pituitary-adrenal (HPA) function. During this period of HPA suppression, patients may exhibit signs and symptoms of adrenal insufficiency when exposed to trauma, surgery or infections, particularly gastroenteritis. Although AeroBid Inhaler may provide control of asthmatic symptoms during these episodes, it does NOT provide the systemic steroid that is necessary for coping with these emergencies.

During periods of stress or a severe asthmatic attack, patients who have been withdrawn from systemic corticosteroids should be instructed to resume systemic steroids (in large doses) immediately and to contact their physician for further instruction. These patients should also be instructed to carry a warning card indicating that they may need supplementary systemic steroids during periods of stress or severe asthma attack. To assess the risk of adrenal insufficiency in emergency situations, routine tests of adrenal cortical function, including measurement of early morning resting cortisol levels, should be performed periodically in all patients. An early morning resting cortisol level may be accepted as normal if it falls at or near the normal mean level.

Localized infections with *Candida albicans* or *Aspergillus niger* have occurred in the mouth and pharynx and occasionally in the larynx. Positive cultures for oral *Candida* may be present in up to 34% of patients. Although the frequency of clinically apparent infection is considerably lower, these infections may require treatment with appropriate antifungal therapy or discontinuance with AeroBid Inhaler.

AeroBid Inhaler is not to be regarded as a bronchodilator and is not indicated for rapid relief of bronchospasm.

Patients should be instructed to contact their physician immediately when episodes of asthma that are not responsive to bronchodilators occur during the course of treatment. During such episodes, patients may require therapy with systemic corticosteroids.

There is no evidence that control of asthma can be achieved by administration of the drug in amounts greater than the recommended doses, which appear to be the therapeutic equivalent of approximately 10 mg/day of oral prednisone. Theoretically, the use of inhaled corticosteroids with alternate day prednisone systemic treatment should be accompanied by more HPA suppression than a therapeutically equivalent regimen of either alone.

Transfer of patients from systemic steroid therapy to AeroBid Inhaler may unmask allergic conditions previously suppressed by the systemic steroid therapy, e.g., rhinitis, conjunctivitis, and eczema.

PRECAUTIONS

General: Because of the relatively high molar dose of flunisolide per activation in this preparation, and because of the evidence suggesting higher levels of systemic absorption with flunisolide than with other comparable inhaled corticosteroids, patients treated with AeroBid should be observed carefully for any evidence of systemic corticosteroid effect, including suppression of bone growth in children. Particular care should be taken in observing patients post-operatively or during periods of stress for evidence of a decrease in adrenal function. During withdrawal from oral steroids, some patients may experience symptoms of systemically active steroid withdrawal, e.g., joint and/or muscular pain, lassitude and depression, despite maintenance or even improvement of respiratory function.

In responsive patients, flunisolide may permit control of asthmatic symptoms without suppression of HPA function. Since flunisolide is absorbed into the circulation and can be systemically active, the beneficial effects of AeroBid Inhaler in minimizing or preventing HPA dysfunction may be expected only when recommended dosages are not exceeded.

The long-term effects of the drug in human subjects are still unknown. In particular, the local effects of the agent on developmental or immunologic processes in the mouth, pharynx, trachea, and lung are unknown. There is also no information about the possible long-term systemic effects of the agent.

The potential effects of the drug on acute, recurrent, or chronic pulmonary infections, including active or quiescent tuberculosis, are not known. Similarly, the potential effects of long-term administration of the drug on lung or other tissues are unknown.

Pulmonary infiltrates with eosinophilia may occur in patients on AeroBid Inhaler therapy. Although it is possible that in some patients this state may become manifest because of systemic steroid withdrawal when inhalational steroids are administered, a causative role for the drug and/or its vehicle cannot be ruled out.

Carcinogenesis: A 22-month study was conducted in Swiss derived mice to evaluate the carcinogenic potential of the drug. There was an increase in the incidence of pulmonary adenomas within the range of adenomas previously reported in the literature for untreated or control Swiss derived mice. An additional study is being conducted in a species with a lower incidence of spontaneous pulmonary tumors.

Impairment of fertility: Female rats receiving high doses of flunisolide (200 mcg/kg/day) showed some evidence of impaired fertility. Reproductive performance in the low (8 mcg/kg/day) and mid-dose (40 mcg/kg/day) groups was comparable to controls.

Pregnancy: Pregnancy Category C. As with other corticosteroids, flunisolide has been shown to be teratogenic in rabbits and rats at doses of 40 and 200 mcg/kg/day respectively. It was also fetotoxic in these animal reproductive studies. There are no adequate and well-controlled studies in pregnant women. Flunisolide should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because other corticosteroids are excreted in human milk, caution should be exercised when flunisolide is administered to nursing women.

ADVERSE REACTIONS

Adverse events reported in controlled clinical trials and long-term open studies in 514 patients treated with AeroBid are described below. Of those patients, 463 were treated for 3 months or longer, 407 for 6 months or longer, 287 for 1 year or longer, and 122 for 2 years or longer.

Musculoskeletal reactions were reported in 35% of steroid-dependent patients in whom the dose of oral steroid was being tapered. This is a well-known effect of steroid withdrawal.

Incidence 10% or greater

Gastrointestinal: diarrhea (10%), nausea and/or vomiting (25%), upset stomach (10%); **General:** flu (10%); **Mouth and Throat:** sore throat (20%); **Nervous System:** headache (25%); **Respiratory:** cold symptoms (15%), nasal congestion (15%), upper respiratory infection (25%); **Special Senses:** unpleasant taste (10%).

Incidence 3-9%

Cardiovascular: palpitations; **Gastrointestinal:** abdominal pain, heartburn; **General:** chest pain, decreased appetite, edema, fever; **Mouth and Throat:** candida infection; **Nervous System:** dizziness, irritability, nervousness, shakiness; **Reproductive:** menstrual disturbances; **Respiratory:** chest congestion, cough, hoarseness, rhinitis, runny nose, sinus congestion, sinus drainage, sinus infection, sinusitis, sneezing, sputum, wheezing; **Skin:** eczema, itching (pruritus), rash; **Special Senses:** ear infection, loss of smell or taste.

Incidence 1-3%

General: chills, increased appetite and weight gain, malaise, peripheral edema, sweating, weakness; **Cardiovascular:** hypertension, tachycardia; **Gastrointestinal:** constipation, dyspepsia, gas; **Hemic/Lymph:** capillary fragility, enlarged lymph nodes; **Mouth and Throat:** dry throat, glossitis, mouth irritation, pharyngitis, phlegm, throat irritation; **Nervous System:** anxiety, depression, lightheadedness, fatigue, hyperactivity, hypothyroidism, insomnia, moodiness, numbness, vertigo; **Respiratory:** bronchitis, chest tightness, dyspnea, epistaxis, head stiffness, laryngitis, nasal irritation, pleurisy, pneumonia, sinus discomfort; **Skin:** acne, hives, or urticaria; **Special Senses:** blurred vision, earache, eye discomfort, eye infection.

Incidence less than 1%, judged by investigators as possibly or probably drug-related: abdominal fullness, shortness of breath.

*The incidences as shown of cough, wheezing, and chest tightness were judged by investigators to be possibly or probably drug-related. In placebo-controlled trials, the overall incidences of these adverse events (regardless of investigators' judgement of drug relationship) were similar for drug and placebo-treated groups. They may be related to the vehicle or delivery system.

CAUTION: Federal law prohibits dispensing without prescription. For full prescribing information, please see package insert.

(NDC 0456-0672-99)

References:

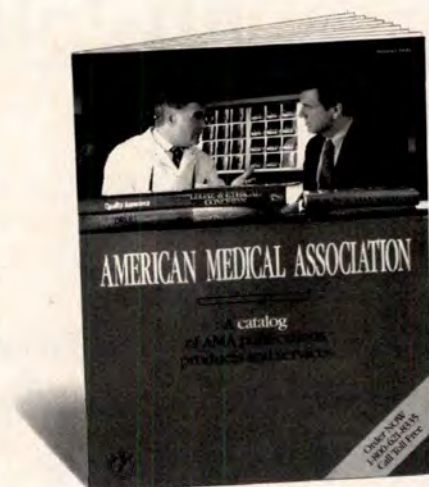
1. National Heart, Lung, and Blood Institute National Asthma Education Program Expert Panel Report—Guidelines for the Diagnosis and Management of Asthma. Bethesda, MD: US Dept of Health and Human Services; 1991.
2. Physicians' Desk Reference®. 45th ed. Oradell, NJ: Medical Economics Co Inc; 1991:955, 1862, 2026.

FOREST PHARMACEUTICALS, INC.
Subsidiary of Forest Laboratories, Inc.
St. Louis, Missouri 63043-9979

Mfd by: Riker Laboratories
Northridge, California 91324
For: Forest Pharmaceuticals, Inc.
St. Louis, MO 63043-9979

© 1991 Forest Pharmaceuticals, Inc.
AER-025-91

The best things in life are free.



*Call for your free guide to
valuable information resources
from the AMA.*

The **AMA Product Catalog** is your most convenient and comprehensive source for AMA publications and services regarding the practice of medicine. You'll find timely information on:

- Practice management
- Legislative and political issues
- Professional liability
- Quality assurance

This new catalog also offers the latest CPT publications; the newest national survey data; and AMA Signature Accessories, a collection of quality gift items and personal accessories.

Call today to request your copy of the **AMA Product Catalog**. The call — and the catalog — are free!

1-800-621-8335



American
Medical
Association

GI safety profile superior to aspirin and even OTC ibuprofen

■ In nearly 100% of patients, single 650 mg doses of aspirin are associated with endoscopically visible gastric mucosal injury¹

■ Substantial clinical and epidemiological evidence suggests that with repeated ingestion, aspirin can induce gastric ulcer disease¹

■ OTC ibuprofen is also associated with GI irritation, although to a lesser degree than aspirin

References: 1. Graham DY, Smith JL. *Ann Intern Med.* 1986;104:390-398. 2. Mehlisch DR, Frakes LA. *Clin Ther.* 1985;7(1):89-97. 3. Data on file, McNeil Consumer Products Company. 4. Aspirin or paracetamol? *Lancet.* 1981;ii:287-289.

Do not exceed eight Gelcaps per 24-hour period. Acetaminophen in large overdoses can cause serious adverse effects. In the event of accidental overdose, contact a poison control center immediately.

EASY TO STOMACH

Unsurpassed relief of mild-to-moderate pain.^{2,3}
Unlikely to cause GI injury.⁴

Recommend

EXTRA-STRENGTH TYLENOL®

acetaminophen



500 mg GELCAPS

First choice for patients in pain

J ADOLESC HEALTH CARE

New York, NY

Financing Health Care for Adolescents: Problems, Prospects, and Proposals

Currently, one in every seven adolescents aged 10 to 18 years is uninsured. This translates to nearly 5 million uninsured adolescents nationwide. Uninsured adolescents, as opposed to insured adolescents, are more likely to be members of poor and minority families. In addition, adolescents without health insurance use fewer health services than their insured counterparts even after controlling for health status differences. Improving the health insurance status of adolescents is becoming an important public policy objective, although Congress recently rejected legislation that would have expanded Medicaid coverage for poor adolescents. Despite this setback, legislators and child health associates are increasingly striving for public and private insurance expansions for adolescents. These efforts are described, and the prospects for future improvements in health insurance coverage of adolescents are discussed.

(1990;11:398-403) Paul W. Newacheck et al, Institute for Health Policy Studies, University of California at San Francisco, San Francisco, CA 94143-0936.

S AFR MED J

Cape Town, South Africa

Financing Health Care for All—Is National Health Insurance the First Step?

Political changes are likely to lead to demands for a more equitable health care system. It will be necessary to pay for more health care for more people without a substantial increase in the resources available. If a substantial proportion of the funds continues to come from private sources, then inequity in access to and the distribution of health care is inevitable. Consequently, it is argued that this can best be achieved if the resources that are available to pay for health care are controlled by a single, centralized coordinating body. It is suggested that it will be more feasible to generate sufficient funds under central control through taxation supplemented by a national health insurance scheme, rather than through simply expanding the contribution to health care that comes out of general tax revenue. Given that private ownership of health care facilities and services is likely to continue for the foreseeable future, central control of the funding of health care will make it possible to regulate the private sector and bring it into a national health plan to provide health care for all.

(1990;78:144-147) C. De Beer et al, Centre for the Study of Health Policy, Department of Community Health, University of the Witwatersrand, Johannesburg, South Africa.

HEALTH SERV RES

Chicago, Ill

Uninsured Working-Age Adults: Characteristics and Consequences

While estimates of the country's uninsured vary, ranging from 10% to 18% of the general population, virtually every study on use of medical services reports that lack of health insurance represents a major barrier to medical care. Based on the 1986 national Robert Wood Johnson Access Survey of 10 130 noninstitutionalized persons, the characteristics of working-age adults without health insurance and the consequences are examined. Among working-age adults, the uninsured are most likely to be poor or near-poor, Hispanic, young, unmarried, and unemployed. Compared with the insured, they have significantly fewer ambulatory visits during a year, are less likely to have contact with a medical provider during a 12-month period, and are more likely to receive their care in a hospital outpatient clinic or emergency department. Differences in

health status do not account for these findings. Especially among persons with chronic and serious illnesses, the uninsured are less likely than the insured to receive medical care. Further, the uninsured are significantly more likely to report needing but not receiving medical care, primarily for economic reasons and, although poorer, they have higher out-of-pocket medical expenses than others in the population.

(1990;24:811-823) Howard E. Freeman et al, Department of Sociology, University of California, 405 Hilgard Ave, Los Angeles, CA 90024-1551.

N ENGL J MED

Boston, Mass

How Does Canada Do It? A Comparison of Expenditures for Physicians' Services in the United States and Canada

As a percentage of the gross national product, expenditures for health care in the United States are considerably larger than in Canada, even though one in seven Americans is uninsured whereas all Canadians have comprehensive health insurance. Among the sectors of health care, the difference in spending is especially large for physicians' services. In 1985, per capita expenditure was \$347 in the United States and only \$202 (in US dollars) in Canada, a ratio of 1.72. We undertook a quantitative analysis of this ratio. We found that the higher expenditures per capita in the United States are explained entirely by higher fees; the quantity of physicians' services per capita is actually lower in the United States than in Canada. Fees for procedures in the United States are more than three times as high as Canadian fees; the difference in fees for evaluation and management services is about 80%. Despite the large difference in fees, physicians' net incomes in the United States are only about one third higher than in Canada. A parallel analysis of Iowa and Manitoba yielded results similar to those for the United States and Canada, except that physicians' net incomes in Iowa are about 60% higher than in Manitoba. Updating the analysis to 1987 on the basis of changes in each country between 1985 and 1987 yielded results similar to those obtained for 1985. We suggest that increased use of physicians' services in Canada may result from universal insurance coverage and from encouragement of use by the larger number of physicians who are paid lower fees per service. Physicians' net income in the United States is not increased as much as the higher US fees would predict, probably because of greater overhead expenses and the lower workloads of America's procedure-oriented physicians.

(1990;323:884-890) Victor R. Fuchs et al, National Bureau of Economic Research, 204 Junipero Serra Blvd, Stanford, CA 94305.

J AM GERIATR SOC

New York, NY

Financing Long-term Care: An Insurance-Based Approach

A joint public-private insurance program is the best approach to resolving the problem of financing long-term care. In this report, we describe one possible approach in detail. A modest expansion of the current (ie, after repeal of the Medicare Catastrophic Coverage Law of 1988) Medicare benefit for persons needing relatively short-term nursing home and home care services would be a first step. For those with extended long-term service needs, a non-means-tested, publicly funded program with joint federal-state financing and administration would provide coverage after a substantial elimination period and with an income-related copayment. Private long-term care insurance purchased through employers before retirement or in the preretirement period, through use of income or equity accumulated in life insurance, pension funds, or home ownership, would be used to fund the exclusionary period or copayments of the public program by those who wish to have greater protection for income or assets. The role of Medicaid would be limited to paying for the deductible, copayments, and initial long-stay expenses of those with low incomes and limited assets.

(1990;38:696-703) L. Gregory Pawlson et al, Center for Aging Studies and Services, Department of Health Care Services, George Washington University Medical Center, 2150 Pennsylvania Ave NW, Washington, DC 20037.



Now any allergic emergency is an indication for

EpiPen® EPINEPHRINE AUTO-INJECTORS

Just remove safety cap and press into thigh.

- Fast, reliable self-administered first-aid for potentially-fatal anaphylactic reactions in sensitive individuals.
- Automatically delivers an accurate premeasured intramuscular dose of epinephrine: 0.3 mg (EpiPen®) or 0.15 mg (EpiPen® Jr.).
- Fits conveniently in pocket or purse. Always ready for immediate use; no filling, assembly or preparation necessary.
- Concealed needle helps overcome possible fear or resistance to self-injection.
- May be injected directly through clothing. Virtually painless; penetrates skin with little or no sensation.

For literature and free supply of EpiPen® Rx pads, please write:



Center Laboratories
Division of EM Pharmaceuticals, Inc.

35 Channel Drive, Port Washington, NY 11050
Tel. 800-645-6335. In NY: 516-767-1800 (call collect).
In CA: 800-824-8732. In AZ, ID, NV, OR, UT, WA: 800-824-8731.

Distributed in Canada by Allerex Laboratories Ltd.,
Montreal, Quebec, Tel. 514-489-9306.

Manufactured for Center Laboratories by Survival Technology, Inc., Bethesda, MD 20814
U. S. Patent Nos. 3,882,863, 4,031,893 and 3,712,301

Brief summary: Before prescribing, please consult package insert.

DESCRIPTION The EpiPen Auto-Injectors contain 2 mL Epinephrine Injection for emergency intramuscular use. Each EpiPen Auto-Injector delivers a single dose of 0.3 mg epinephrine from Epinephrine Injection, USP, 1:1000 (0.3 mL) in a sterile solution. Each EpiPen Jr. Auto-Injector delivers a single dose of 0.15 mg epinephrine from Epinephrine Injection, USP, 1:2000 (0.3 mL) in a sterile solution. Each 0.3 mL also contains 1.8 mg sodium chloride, 0.5 mg sodium metabisulfite, hydrochloric acid to adjust pH, and Water for Injection. The pH range is 2.5-5.0.

CLINICAL PHARMACOLOGY Epinephrine is a sympathomimetic drug, acting on both alpha and beta receptors. It is the drug of choice for the emergency treatment of severe allergic reactions (Type I) to insect stings or bites, foods, drugs, and other allergens. It can also be used in the treatment of idiopathic or exercise-induced anaphylaxis. Epinephrine when given subcutaneously or intramuscularly has a rapid onset and short duration of action.

INDICATIONS AND USAGE Epinephrine is indicated in the emergency treatment of allergic reactions (anaphylaxis) to insect stings or bites, foods, drugs and other allergens as well as idiopathic or exercise-induced anaphylaxis. The EpiPen Auto-Injector is intended for immediate self-administration by a person with a history of an anaphylactic reaction. Such reactions may occur within minutes after exposure and consist of flushing, apprehension, syncope, tachycardia, throady or unobtainable pulse associated with a fall in blood pressure, convulsions, vomiting, diarrhea and abdominal cramps, involuntary voiding, wheezing, dyspnea due to laryngeal spasm, pruritis, rashes, urticaria or angioedema. The EpiPen is designed as emergency supportive therapy only and is not a replacement or substitute for immediate medical or hospital care.

CONTRAINDICATIONS There are no absolute contraindications to the use of epinephrine in a life-threatening situation. **WARNINGS** Epinephrine is light sensitive and should be stored in the tube provided. Store at room temperature (15°-30°C/59°-86°F). Do not refrigerate. Before using, check to make sure solution in Auto-Injector is not discolored.

Replace the Auto-Injector if the solution is discolored or contains a precipitate. Avoid possible inadvertent intravascular administration. Select an appropriate injection site such as the thigh. **DO NOT INJECT INTO BUTTOCK.** Large doses or accidental intravenous injection of epinephrine may result in cerebral hemorrhage due to sharp rise in blood pressure. **DO NOT INJECT INTRAVENOUSLY.** Rapidly acting vasodilators can counteract the marked pressor effects of epinephrine.

Epinephrine is the preferred treatment for serious allergic or other emergency situations even though this product contains sodium metabisulfite, a sulfite that may in other products cause allergic-type reactions including anaphylactic symptoms or life-threatening or less severe asthmatic episodes in certain susceptible persons. The alternatives to using epinephrine in a life-threatening situation may not be satisfactory. The presence of a sulfite in this product should not deter administration of the drug for treatment of serious allergic or other emergency situations.

PRECAUTIONS Epinephrine is ordinarily administered with extreme caution to patients who have heart disease. Use of epinephrine with drugs that may sensitize the heart to arrhythmias, e.g., digitalis, mercurial diuretics, or quinidine, ordinarily is not recommended. Anginal pain may be induced by epinephrine in patients with coronary insufficiency. The effects of epinephrine may be potentiated by tricyclic antidepressants and monoamine oxidase inhibitors. Hyperthyroid individuals, individuals with cardiovascular disease, hypertension, or diabetes, elderly individuals, pregnant women, and children under 30 kg (66 lbs.) body weight may be theoretically at greater risk of developing adverse reactions after epinephrine administration. Despite these concerns, epinephrine is essential for the treatment of anaphylaxis. Therefore, patients with these conditions, and/or any other person who might be in a position to administer EpiPen or EpiPen Jr. to a patient experiencing anaphylaxis should be carefully instructed in regard to the circumstances under which this life-saving medication should be used.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY Studies of epinephrine in animals to evaluate the carcinogenic and mutagenic potential or the effect on fertility have not been conducted.

USAGE IN PREGNANCY Pregnancy Category C: Epinephrine has been shown to be teratogenic in rats when given in doses about 25 times the human dose. There are no adequate and well-controlled studies in pregnant women. Epinephrine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

PEDIATRIC USE Epinephrine may be given safely to children at a dosage appropriate to body weight (see Dosage and Administration).

ADVERSE REACTIONS Side effects of epinephrine may include palpitations, tachycardia, sweating, nausea and vomiting, respiratory difficulty, pallor, dizziness, weakness, tremor, headache, apprehension, nervousness and anxiety. Cardiac arrhythmias may follow administration of epinephrine.

OVERDOSAGE Overdosage or inadvertent intravascular injection of epinephrine may cause cerebral hemorrhage resulting from a sharp rise in blood pressure. Fatalities may also result from pulmonary edema because of peripheral vascular constriction together with cardiac stimulation.

DOSEAGE AND ADMINISTRATION Usual epinephrine adult dose for allergic emergencies is 0.3 mg. For pediatric use, the appropriate dosage may be 0.15 or 0.30 mg depending upon the body weight of the patient. However, the prescribing physician has the option of prescribing more or less than these amounts, based on careful assessment of each individual patient and recognizing the life-threatening nature of the reactions for which this drug is being prescribed. With severe persistent anaphylaxis, repeat injections with an additional EpiPen may be necessary.

HOW SUPPLIED EpiPen and EpiPen Jr. Auto-Injectors are available singly or in packages of twelve.

CAUTION Federal (U.S.A.) law prohibits dispensing without a prescription.

Issued: April 1988



Claim the AMA as your sole supplier!

AMA Health Insurance Claim Forms will help keep your reimbursement process running smoothly, simply and reliably. They're designed to assist you in accurately reporting your services to both government and private insurers.

Approved for Filing With Medicare

A recent Medicare mandate requires physicians to complete and submit claim forms for all Medicare recipients.

Accurate and Economical

AMA Health Insurance Claim Forms are the industry standard... a standard the AMA helps design. So you know you're getting the most accurate, up-to-date forms available. They're also economically priced. Best of all, *AMA members receive a 20% discount.*

Four Convenient Formats

There's a perfect form for every office system: single form, snap-out form, and continuous form with and without bar code.

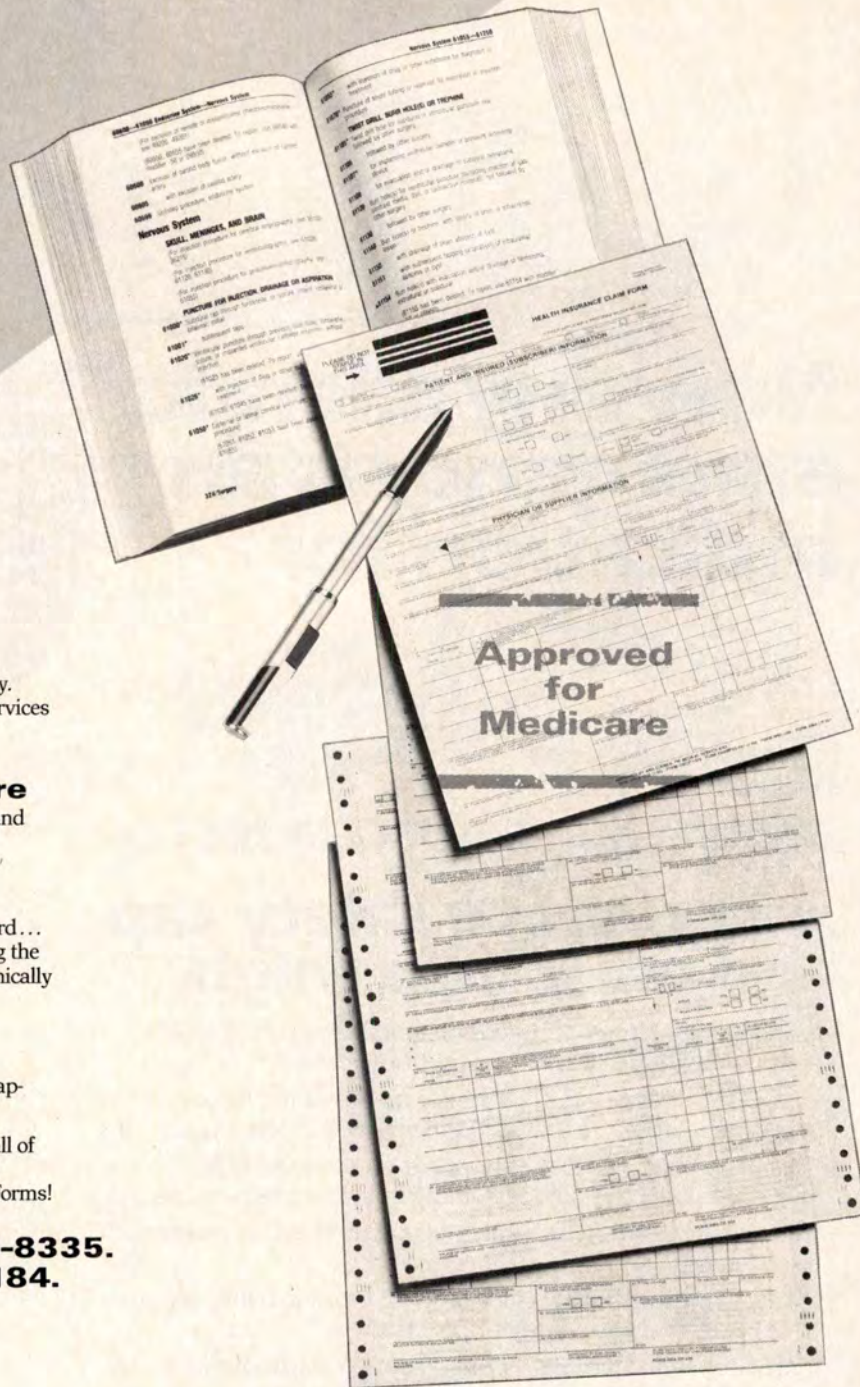
Easy to use, economically priced and always accurate. With all of these benefits, there's no need to order from any other source. Make the AMA your sole supplier of Health Insurance Claim Forms!

To order, call toll free: 1-800-621-8335.

Or FAX your order: 1-312-464-4184.

Monday through Friday, 8:30am to 4:30pm Central Time.

Or use the order form. MasterCard and Visa are welcome.



Order your Claim Forms today!

Please complete this order form and return it with payment to:

Book & Pamphlet Fulfillment
American Medical Association
P.O. Box 2964
Milwaukee, Wisconsin 53201

Name

Address

City/State Zip

Member Identification # (needed for discount)

☐ Enclosed is my check payable to:

American Medical Association

☐ MasterCard ☐ Visa

Card number

Expiration date Phone #

Cardholder's signature

Single Form

1-page, 100/pad, 10 pads/carton,

Kodak bar code

AMA Member Price: \$27.28/carton

Non-member Price: \$34.10/carton

Order Number: OP050185

Cartons

Snap-Out Form

2-part NCR, 1000/carton, Kodak bar code

AMA Member Price: \$39.60/carton

Non-member Price: \$49.50/carton

Order Number: OP050285

Cartons

Continuous Form

2-part NCR, w/pinfeeds for computer

printers, 1000/carton, Kodak bar code

AMA Member Price: \$41.50/carton

Non-member Price: \$51.75/carton

Order Number: OP050385

Cartons

Continuous Form

2-part NCR, w/pinfeeds for computer

printers, 1000/carton, NO bar code

AMA Member Price: \$41.40/carton

Non-member Price: \$51.75/carton

Order Number: OP050587

Cartons

Sub Total \$

Sales Tax (see chart below) \$

On orders less than \$35, add
\$3.50 shipping and handling \$

TOTAL \$

Sales Tax Remember to include your
sales tax, where applicable.

State Tax	State Tax	State Tax
AZ 6.70%	IA 4.00%	ND 5.50%
AR 6.00%	KS 6.25%	OH 7.00%
CA 7.25%	MN 6.50%	SC 5.00%
CT 8.00%	NE 6.50%	TN 7.75%
DC 6.00%	NV 6.00%	WA 8.10%
GA 6.00%	NM 5.875%	WV 6.00%
ID 5.00%	NY 8.25%	WI 5.50%
IL 8.00%	NC 5.00%	

GW015



True once-daily antihypertensive control*

Proved by countless patients well controlled on
one ISOPTIN SR tablet per day – 180 mg or 240 mg –
with virtually no change in metabolic parameters or quality of life
(total daily doses above 240 mg should be administered in divided doses).

As evidenced by well-controlled, long-term studies at more than 4
US centers. With q.d. dosing, blood pressure was controlled
at 24 hours as demonstrated by a drop in diastolic BP to target level.

Supported by more than **32,000,000** prescriptions written
for once-daily verapamil SR† over the past 4.5 years.

ONCE-DAILY
ISOPTIN SR
(verapamil HCl) 180/240 mg
Sustained-Release
Tablets



BASF Group

*Clinical effectiveness is unrelated to drug-plasma levels.

†Constipation is the most frequently reported side effect of ISOPTIN® SR and is easily managed in most patients.

ISOPTIN® SR should be administered with food.

†Verapamil SR produced by Knoll for Knoll Pharmaceuticals and G.D. Searle & Co.

Please see back
for brief summary of
prescribing information.

ONCE-DAILY ISOPTIN SR (verapamil HCl) Sustained-Release Tablets

Unsurpassed dosage flexibility



180 mg

The recommended starting/maintenance dose



240 mg

For patients who require a step up in dosage



120 mg*

For elderly or small-stature patients who require lower doses

*An economical choice for the few patients requiring a 120-mg dose (half of a 240-mg tablet). Sustained-release characteristics are not altered when the tablet is divided in half.

From the originators of verapamil



BASF Group

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

© 1991, BASF K&F Corporation
11090/5/91 Printed in USA

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS). 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock. 3) Sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker). 4) 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker). 5) Patients with atrial flutter or atrial fibrillation and an accessory bypass tract (e.g., Wolff-Parkinson-White, Lown-Ganong-Levine syndromes). 6) Patients with known hypersensitivity to verapamil hydrochloride.

WARNINGS: **Heart Failure:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction. Patients with mild left ventricular dysfunction should, if possible, be controlled before verapamil treatment. ISOPTIN should be avoided in patients with any degree of left ventricular dysfunction if they are receiving a beta adrenergic blocker (see DRUG INTERACTIONS). **Hypotension:** ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. **Elevated Liver Enzymes:** Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. **Accessory Bypass Tract (Wolff-Parkinson-White):** Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway may develop increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk (see CONTRAINDICATIONS). Treatment is usually D.C. cardioversion. **Atrioventricular Block:** The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. **Patients with Hypertrophic Cardiomyopathy (IHSS):** Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: **Impaired Hepatic or Renal Function:** Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted as metabolites in the urine. In patients with impaired hepatic function the dose should be cut to 30% of the usual dose and the patient closely monitored. In patients with impaired renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSE). **Use in Patients with Attenuated (Decreased) Neuromuscular Transmission:** Verapamil decreases neuromuscular transmission and may prolong recovery from neuromuscular blocking agents. In patients with attenuated neuromuscular transmission lower doses of verapamil may be warranted.

Drug Interactions: **Beta Blockers:** Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may result in additive negative effects on heart rate, atrioventricular conduction, and/or cardiac contractility. Excessive bradycardia and AV block, has been reported. The combination should be used only with caution and close monitoring. **Digitalis:** Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated. However, chronic verapamil treatment increases serum digoxin levels by 50% to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. **Antihypertensive Agents:** Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, alpha and beta adrenergic blockers) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. **Antiarrhythmic Agents:** **Disopyramide:** Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. **Flecainide:** Concomitant administration of flecainide and verapamil may result in additive negative inotropic effect and prolongation of atrioventricular conduction. **Quinidine:** In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine may result in significant hypotension. **Other: Nitrates:** The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. **Cimetidine:** Variable results on clearance have been obtained in acute studies of healthy volunteers; clearance of verapamil was either reduced or unchanged. **Lithium:** Pharmacokinetic (lowering of serum lithium levels) and pharmacodynamic (increased sensitivity to the effects of lithium) interactions between oral verapamil and lithium have been reported. **Carbamazepine:** Verapamil therapy may increase carbamazepine concentrations and produce related side effects during combined therapy. **Rifampin:** Therapy with rifampin may markedly reduce oral verapamil bioavailability. **Phenobarbital:** Phenobarbital therapy

may increase verapamil clearance. **Cyclosporin:** Verapamil therapy may increase serum levels of cyclosporin. **Anesthetic Agents:** Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. **Pregnancy (Category C):** There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor and delivery, only if clearly needed. **Nursing Mothers:** ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. **Pediatric Use:** Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 7.3%, dizziness 3.3%, nausea 2.7%, hypotension 2.5%, headache 2.2%, edema 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, dyspnea 1.4%, bradycardia 1.4%, 2° and 3° AV block 0.8%, rash 1.2%, flushing 0.6% and elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, atrioventricular dissociation, arthralgia and rash, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, ecchymosis or bruising, equilibrium disorders, erythema multiforme, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, Steven-Johnson syndrome, sweating, syncope, urticaria.

Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSEAGE: Treatment of overdose should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdose with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

DOSEAGE AND ADMINISTRATION Essential Hypertension

The dose of ISOPTIN SR should be individualized by titration and the drug should be administered with food. Initiate therapy with 180 mg of sustained-release verapamil HCl, ISOPTIN SR, given in the morning. Lower, initial doses of 120 mg a day may be warranted in patients who may have an increased response to verapamil (e.g., the elderly or small people, etc.). Upward titration should be based on therapeutic efficacy and safety evaluated weekly and approximately 24 hours after the previous dose. The antihypertensive effects of ISOPTIN SR are evident within the first week of therapy.

If adequate response is not obtained with 180 mg of ISOPTIN SR, the dose may be titrated upward in the following manner:

- 240 mg each morning
- 180 mg each morning plus 180 mg each evening, or 240 mg each morning plus 120 mg (1/2 240 mg tablet) each evening
- 240 mg every twelve hours

When switching from immediate release ISOPTIN to ISOPTIN SR, the total daily dose in milligrams may remain the same.

2767-2/90

Printed in U.S.A.



Actual size

THE WISDOM OF RECOMMENDING THE UNDER \$50 BLOOD GLUCOSE MONITOR.

For some of your patients, compliance with your diabetes management program depends on the cost of the monitor. For them, recommend the Tracer® II system. The accurate, high-performance monitor comes with a complete kit for less than \$50 at participating dealers. The Tracer® II system. It's the best recommendation you can make, price-wise.

To find out more,
call 1-800-858-8072.

**BOEHRINGER
MANNHEIM
CORPORATION**



TRACER® II

THE UNDER \$50 BLOOD GLUCOSE MONITOR

Boehringer Mannheim Corporation, Patient Care Systems Division
9115 Hague Road, P.O. Box 50100, Indianapolis, IN 46250-0100
© 1991 Boehringer Mannheim Corporation. All rights reserved. TRT-405

A Decade of Commitment to Informed Health Care

Roche Laboratories
presents the
Resource Library
for Patient
Information



Copyright© 1991 by Hoffmann-La Roche Inc.

Since 1978, the Roche Medication Education (ME) Program has provided informational booklets designed to supplement rather than supplant your own personal rapport with your patients. The booklets stress to the patient the importance of following your instructions and address the questions most frequently asked by patients in an easy-to-follow question and answer format.

Each booklet helps you provide...

- Reinforcement of your instructions
- Enhancement of compliance
- Satisfaction with office visits

The program offers product specific and general information booklets for you to give to your patients. This extensive library of patient information booklets is available to you without expense or obligation. To obtain a complimentary supply of those booklets that are applicable to your practice, simply check the appropriate boxes on the coupon and mail it to:

Roche Medication Education
Hoffmann-La Roche Inc.
340 Kingsland Street
Nutley, NJ 07110-1199

BUMEX® (bumetanide/Roche)

0.5-mg, 1-mg and 2-mg scored tablets; 2-mL ampuls and 2-mL, 4-mL and 10-mL vials (0.25 mg/mL)

Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome. Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route. Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity. **CONTRAINDICATIONS:** Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment. **WARNINGS:** Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients. Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients. In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses. Patients allergic to sulfonamides may show hypersensitivity to Bumex. **PRECAUTIONS:** Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets. Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes. Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions. Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions. Drugs with nephrotoxic potential and bumetanide should not be administered concurrently with Bumex. Concurrent therapy with indomethacin not recommended. Interaction studies in humans have shown no effect on digoxin blood levels. Interaction studies in humans have shown no effect on plasma prothrombin activity. **Pregnancy:** Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus. Bumetanide may be excreted in breast milk. **Pediatric use:** Safety and effectiveness below age 18 not established. **ADVERSE REACTIONS:** Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease). Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting. Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection. Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy. Also reported have been thrombocytopenia, deviations in hemoglobin, prothrombin time, hematocrit, WBC and differential counts. There have been rare spontaneous reports of thrombocytopenia from postmarketing experience. Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance. Increases in urinary glucose and urinary protein have also been seen. **DOSAGE AND ADMINISTRATION: Oral Administration:** The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose. **Parenteral Administration:** Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day. **HOW SUPPLIED: Tablets:** 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500; 100 and 500 mg cartons of 100, 100 and 100 tablets. **HOW SUPPLIED: Ampuls:** 0.5 mg — ROCHE BUMEX 0.5; 1 mg — ROCHE BUMEX 1; 2 mg — ROCHE BUMEX 2. **Ampuls:** 2 mL, 0.25 mg/mL, boxes of ten. **Vials:** 2 mL, 4 mL and 10 mL, 0.25 mg/mL, boxes of ten. Store all tablets, vials and ampuls at 59° to 86°F.

Use this coupon to order your complimentary supply of Roche ME patient information booklets

Product Specific Booklets
(English and Spanish)

- **Bactrim™**
(trimethoprim & sulfamethoxazole/Roche)
- **Berocca®**
(multivitamin/mineral)
- **Bumex®**
(bumetanide/Roche)*
- **Dalmane®**
(brand of flurazepam hydrochloride/Roche) @
- **Efudex®**
(fluorouracil/Roche)
- **Fluorouracil**
Injection/Roche
- **Librium®**
(brand of chlordiazepoxide HCl/Roche) @
- **Limbitrol®**
(brand of chlordiazepoxide and amitriptyline HCl/Roche) @
- **Rocaltral®**
(calcitriol/Roche)
- **Rocephin®**
(ceftriaxone sodium/Roche)
- **Valium®**
(brand of diazepam/Roche) @

The What If Book

English Spanish Large type

How To Booklets

- Title
- Antibacterial Medication
- Diuretic Medication
- Tranquilizer Medication
- Sleep Medication

Please send my Roche representative



Name (please print)

Street Address

City

State

Zip

*See advertisement for summary of product information.

Roche Laboratories

a division of Hoffmann-La Roche Inc.

340 Kingsland Street, Nutley, New Jersey 07110-1199

Working today for a healthier tomorrow.

JAMA

PI. 0688

Caring for the Uninsured and Underinsured

To the Editor.—Access to health care is a significant problem for millions of Americans, particularly for those who are poor, homeless, lack health insurance, and are unemployed. Proposed comprehensive solutions to health care access problems, including mandated employer-based health insurance, health insurance risk pools, and universal health insurance programs, may take several years of public and private debate before they are finally enacted.¹⁻³

In the meantime, physicians have an obligation to provide a portion of their professional time to serving those without the resources to pay.⁴ Many physicians dedicate substantial portions of their efforts to providing such free care, acting as role models for their peers as well as for those still in medical training.⁵ However, the extent to which the academic medical profession and its educational processes support such efforts is unknown. The current study was designed to assess the commitments of US medical schools toward providing free health care outside their hospital environments and within their respective communities.

Study.—All US medical schools were surveyed to determine how many schools sponsor or have affiliations with free health care clinics serving indigent or homeless populations. Of the 126 accredited medical schools, 110 (87%) were successfully contacted and agreed to a telephone interview.

Of these schools, 27% indicated that they currently have affiliations with and provide care at local free medical clinics. Although public medical schools accounted for 69% of the universities responding to the survey, they accounted for 83% of those schools with free indigent clinics. Only 12% of the private medical schools provided such services. Thirty-three percent of the free medical clinics involved medical students as the primary coordinators of the clinics. The primary medical school sponsoring departments for these free clinics were family medicine ($n=15$) and internal medicine ($n=5$).

Comment.—Until some substantial changes occur in our current health care system, millions of Americans will re-

main without access to health care. Some academic medical centers have responded to the current crisis by helping to establish and staff free medical clinics. Our survey shows, however, that the majority of medical universities have not contributed resources for these purposes, particularly private medical centers where eight of nine centers lacked formal programs.

Academic medicine's clinical involvement in access to health care issues provides benefits to patients, students, and society. Patients benefit from having direct health care access as well as from having a formal advocacy network. Medical students, residents, and other health care professionals benefit from learning the importance of social constructs on disease processes as well as by working with other health care providers and community agencies. Finally, society benefits by the knowledge that within ongoing dialogues to improve health care access, its health care professionals are leading by example in the struggle to eliminate inequalities. Opportunities exist within our current health care system for academic medicine to increase its commitments to these problems.

Adam O. Goldstein, MD
Laura Enyedi
Marlene Calderon
Jeff Babb
Scott Bennett
University of North Carolina
School of Medicine
Chapel Hill

1. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s. *N Engl J Med.* 1989;320:94-101.
2. Himmelstein DU, Woolhandler S. A national health program for the United States. *N Engl J Med.* 1989;320:102-108.
3. Ginsburg JA, Prout DM. Access to health care, American College of Physicians. *Ann Intern Med.* 1990;112:641-661.
4. Lundberg GD, Bodine L. Fifty hours for the poor. *JAMA.* 1989;262:3045.
5. Hilfiker D. Are we comfortable with homelessness? *JAMA.* 1989;262:1375-1376.

To the Editor.—The availability and affordability of health care is no longer only a medical concern. Our great state of Texas has one of the highest percentages of uninsured and underinsured citizens in the United States.

Recognizing this problem as it applies to the State of Texas, the Texas Medical Association (TMA), in response to its House of Delegates, in 1990 began a study bringing together a statewide coalition with representation from businesses, consumers, hospital administrators, insurers, legislators, physicians, and trial lawyers. We successfully de-

veloped a consensus for a plan that will begin to address the spiraling premium costs, decreased availability of health insurance, and lack of access to health care for more than 2.3 million uninsured Texans whose incomes are less than 200% of the poverty level. This plan will also address some of the issues experienced by the underinsured.

The consensus document, "Insuring the Uninsured: A Plan for Texas," will serve as the basis for the TMA's legislative package on health insurance reform and cost-containment issues. The five-step plan proposes increased expansion in eligibility for Medicaid recipients and improvements in physician and provider Medicaid reimbursement, a state-created sliding scale entitlement program that offers a basic package of primary and preventive health care services for the working poor, the creation of a basic benefit package for small-group businesses, adequate funding of the Texas Health Insurance Risk Pool created by the 1989 Texas legislative session for the medically uninsurable, and, finally, proposals for health care cost containment and health insurance reform, including ERISA reform, standardizing health insurance policy language, and holding health care providers and insurance companies to high standards of representation to the public. Several additional recommendations to implement health care cost containment are included in the proposal to the Texas legislature.

We hope that cooperative initiatives, which include the many interested parties whom I have described, can provide

Guidelines for Letters

Letters will be published at the discretion of the editor as space permits and subject to editing and abridgment. They should be typewritten double-spaced and submitted in duplicate. They should not exceed 500 words of text. References, if any, should be held to a minimum, preferably five or fewer. Letters discussing a recent *JAMA* article should be received within 1 month of the article's publication. Letters must not duplicate other material published or submitted for publication. A signed statement for copyright, authorship responsibility, and financial disclosure is essential for publication. It is not feasible routinely to return unpublished letters unless such is requested. Letters not meeting these guidelines are generally not acknowledged. Also see Instructions for Authors.

Edited by Drummond Rennie, MD, Deputy Editor (West), and Don Riesenber, MD, Senior Editor.

an approach to solving what is fast becoming an intolerable situation.

Gerald H. Holman, MD
Texas Medical Association
Committee on Access to Health Care
Austin

To the Editor.—With more than 40 000 people living below the poverty level in Alachua County, Florida, we are acutely aware of the problems facing the medical community in caring for the uninsured and underinsured. Though we do not propose to have a solution for the high cost of health care for the indigent, we are proud of our local safety-net program called the "We Care Physician Referral Network." The network, which was established informally in 1985, provides an innovative way for physicians to volunteer their time while providing access to specialty care for many of our area's indigent. In light of our new governor's budget proposal to assess all physicians \$500 to help pay for health care for the indigent, I encourage others to organize their indigent care programs to show that physicians are already donating more than that in free health care.

This is basically how our program works. About 68% of the Alachua County Medical Society membership have volunteered to accept indigent referrals from the We Care Network on a periodic, rotating basis. The We Care Network coordinator, who is stationed at the public health unit, accepts patients into the program on the basis of medical and financial need and county residency. Most of these patients, who are in need of specialty care, receive primary care from the public health unit or other area clinics. The coordinator will refer the indigent patient to the specialty physician on the top of the list for that specialty. Once the patient has been seen, that physician's name is rotated to the bottom of the list, ensuring equitable patient distribution to all participating physicians and hospitals. No physician is asked to see more than one patient a month.

I do not mean to make the program sound deceptively easy. Much time was spent coordinating this program with the county commission, the health care board, the health planning council, the primary care providers, the physicians, and the hospitals. We fought hard to keep the program strictly voluntary, without any contractual confinements. The county commission has agreed to provide funding for the coordinator position and the data accumulation. These are the only budgetary needs of the program.

In our first 9 months as a formalized program, the physicians and the hospi-

tals have donated more than \$482 000 in services to indigents in this area. We have saved money by providing access to hundreds of patients who would have gone to the emergency department in the past. In addition to confirming the need for this program, the statistics show that each of our three area hospitals participated equally.

The We Care Network is not a solution to the problems associated with caring for the uninsured, but rather a part of a many-faceted and innovative plan to reduce the cost of health care and improve access to health care for lower-income Americans. I believe that only through the active involvement of physicians will an equitable and effective solution to this problem arise.

E. Scott Medley, MD
Alachua County
Medical Society
Gainesville, Fla

To the Editor.—Community health centers (CHCs) are federally funded clinics that exist to provide primary health care services to underserved populations of the United States. Approximately 6 million of our country's poor receive their health care at one of the 600 CHCs. In addition, CHCs house approximately 50% of all the nation's homeless health care projects and vigorously pursue other issues including the acquired immunodeficiency syndrome, adequate prenatal care, and chemical dependency. The 1990s will be troublesome for many CHCs as the real federal dollars have decreased and it is increasingly difficult to recruit and retain providers. Because CHCs are distributed throughout the country, these problems will be felt in every geographic area.

Over the same area one also finds another source of health care providers. These are the primary care residency training programs. Family medicine residency programs have many characteristics similar to those of CHCs. Each took root in the mid-to-late 1960s after a period of experimentations and developments in the early 1960s. Both received initial support from community movements and the federal government. Both espoused, then and now, many of the same principles: a commitment to the broader issues of health care (such as equal access for all), a major interest in prevention, and an interdisciplinary approach to the provision of health care. But at this time many family medicine residency programs are also struggling. They are experiencing financial difficulties and trouble enrolling enough patients for "teaching."

It seems logical that these two types

of providers could work together in a symbiotic relationship to help achieve each of their missions. Teaching young physicians the art of providing primary family medical care will result in families' receiving the care that CHCs strive to provide. In 1986 a national survey by the US Public Health Service revealed that 44 CHCs had some type of affiliation with a family medicine residency program. There have been calls for more alliances between these two entities,¹ but little has been done to promote affiliations. Such affiliations not only would provide an immediate source of care to the underserved, but also, as suggested by one study,² might lead to more primary care physicians' serving in underserved areas in the future.

Unfortunately, as yet there has not been an evaluation of CHC-family medicine residency affiliations. It is unknown how many affiliations currently exist or what organizational structure is successful. Nor has work been done to determine what can lead to a positive affiliation and prevent difficulties, though this information is necessary to provide a framework for the expansion of CHC-residency program affiliations.

Timothy J. Moore, MD, MS
Sioux Falls Family Practice Residency
University of South Dakota
School of Medicine

1. Engebretsen BJ. Family medicine and community health centers: a natural alliance. *Fam Med.* 1989;21:417-418.
2. Gessert C, Blossom J, Sommers P. Family physicians for underserved areas: the role of residency training. *West J Med.* 1989;150:226-230.

To the Editor.—No approach to the problems of the medically uninsured and underinsured—and, in particular, to the desperate tragedies of the inner cities—can succeed without addressing a crucial need: the recruitment and training of physicians specifically to serve in the urban areas that represent the greatest concentration of populations at risk.

Decades of experience indicate that the existing undergraduate and graduate medical education systems, even with genuine commitment, are not attuned to the task. Excellence of biomedical education is necessary but insufficient for the effective practice of medicine and the management of community-based approaches to health in these ravaged urban landscapes. The lack of subsequent support structures for graduates intensifies the problem even for those who are committed. Existing quid pro quo plans that provide scholarships in return for subsequent service commitments (but inevitably have buy-out provisions) have failed to ameliorate the desperate shortage of primary care physicians in underserved

urban areas.

To provide physicians appropriately trained and adequately motivated for this task, we need to create something new: a public-sector, public-interest medical school explicitly committed to this task that unites a public university, public hospitals, and community health centers as teaching sites; includes a health department; and provides a curriculum that is enriched in both the biomedical and behavioral dimensions appropriate to the needs of the target population. To provide a support structure for continuing practice in underserved areas, we need an Urban Health Corps with funding adequate to ensure decent salaries, professional fulfillment, and continuing medical education throughout a 5- to 10-year service period. Finally, we need the restoration of services removed by the devastating cuts in the community health center network. The costs of all this would be more than offset by the savings in hospitalization—and in productive lives.

There is an analogue—the Uniformed Services University of the Health Sciences, Bethesda, Md. Our nation's security depends no less on the protection of our domestic health. And there is already a precursor: the City University of New York (NY) Medical School, located in central Harlem and drawing on the underserved population itself—a vast, untapped human resource—for its student body. Our experience demonstrates that, even in the midst of deprivation and epidemic, there is no shortage of able, committed students who want to serve.

H. Jack Geiger, MD
The City University of
New York (NY) Medical School

To the Editor.—My wife and I operate a free clinic that might serve as one model for provision of medical care to the uninsured. The clinic provides basic primary care and pediatric immunizations to people who cannot afford \$50 for a blood pressure check or \$100 for shots.

It is open one night a week in the office of a local Hispanic community organization, and 15 to 20 patients are seen each night. They are screened for ability to pay, but almost everyone is accepted; a donation of \$1 to \$5 is encouraged. There are two to four volunteer physicians, one or two volunteer nurses, one or two volunteer secretaries, and one or two paid translators. Modest overhead costs are paid. The budget is under \$10 000 a year, or about \$10 per patient visit. Start-up costs for basic office equipment were about \$3000, given by Warner Lambert. We also have grants from United Way and

the Robert Wood Johnson Foundation.

About 20 local physicians in various specialties have agreed to see referrals for no fee or a reduced fee, and patients are also referred to the local hospital clinics, for example, the prenatal clinic. At the hospital they are screened and pay on a sliding scale: up to \$100 a visit.

We perform urine tests, measure hemoglobin and blood glucose levels, and carry out pregnancy tests. Roentgenograms and other laboratory work are performed at the hospital. Prescriptions are filled at a local pharmacy that has agreed to give discounts. A local optometrist provides glasses at cost. The emphasis is on basic, no-frills medicine. Tests are ordered sparingly, and a drug supply house catalog is used to check on the cost of medications. Immunizations are supplied free by the state. Because of our low overhead, services can be provided much more cheaply than in the hospital clinics, and the hospital is relieved of a financial burden.

We are ourselves volunteers, and to some extent we depend on volunteers. Medical care for the uninsured is going to take either a lot of money or a lot of volunteers. There's still a little public and private money around, and, with proper organization and encouragement, there may be enough volunteers.

Robert Zufall, MD
Dover, NJ

To the Editor.—San Francisco, Calif, is currently "home" to an estimated 6000 to 10 000 people with no place of their own to live and sleep. Currently available medical resources are not adequate to meet the needs of these people, due to financial or geographic barriers. Even with an existing network of public clinics and health care visits in homeless shelters, many go without needed care.

In 1988, the San Francisco Department of Health and San Francisco Medical Society embarked on a partnership aimed at filling this gap. An arrangement was made whereby the Department of Public Health would provide liability coverage for any physician or other health care provider who volunteered his or her services for the city's homeless program, and the local medical school would provide teaching credit to clinical faculty members who provided care while supervising medical residents.

The next step has been to recruit volunteers, and two meetings at the medical society drew large numbers of nurses and lesser numbers of physicians. Subsequent calls for volunteers have gone out in local medical and lay publications. Approximately half a dozen physicians have followed through in

providing volunteer services, and one dermatologist has been conducting a very well-received monthly clinic for the past 2 years.

There is need for more physician volunteers. The lure of liability coverage and teaching credit has not been as attractive as hoped, nor has offering to schedule clinic times at the discretion and convenience of the volunteer. We are now considering developing a list of physicians who would see a predetermined number of homeless patients in their own offices, and then providing appropriate patients with those physicians' business cards after initial assessment at the public clinics.

Homeless people as a group have a high prevalence of medical and mental health problems, but many, if not most, of such problems can be dealt with in the provision of basic primary and preventive care.¹ The most immediate need, therefore, is for a larger number of physicians who consider this kind of public service a part of the privilege and responsibility of their profession.

Steve Heilig, MPH
San Francisco (Calif)
Medical Society
Daniel Wlodarczyk, MD
San Francisco (Calif)
Department of Public Health

1. Wlodarczyk D, Prentice R. Health issues of homeless persons. *West J Med.* 1988;148:717-719.

To the Editor.—I practice with a multispecialty group in a city with a population of 25 000. Our group draws from a regional population base of approximately 100 000. All of our physicians but one have both office- and hospital-based practices. Our accounts department screens patients for us so that elective services are provided only to patients who have resources to cover the cost of the service. Individual physicians may, at their discretion, opt for less stringent screening standards. Hospital services are provided by physicians on an urgent or emergency basis almost entirely without knowledge of, or consideration for, a patient's ability to pay. Despite our taking steps to limit elective services for underinsured and uninsured patients, our group wrote off over \$1 million in services as uncollectible in the fiscal year 1990. This amounted to over \$50 000 per practitioner! One can only wonder how staggering the write-off might have been had some sort of screening policy not been adopted. As sizable as it is, the financial write-off is only a footnote to the stress, sleep deprivation, health risks, and liability incurred in caring for these patients.

I use the above data to support my contention that physicians already resemble White Knights rather than

Darth Vaders when it comes to the plight of the underinsured and uninsured. I would suggest that our critics, be they members of government and business or the underinsured themselves, ask as much of themselves as they do of physicians. If our critics are willing to give their energy and resources in the same proportion as physicians, then we will have come a long way toward solving this problem.

Bruce Harris, MD
Statesville (NC)
Medical Group

To the Editor.—We have been fortunate to work at Cook County Hospital in Chicago, Ill, for the past 5 years and therefore have observed firsthand the care provided to the indigents of our city. While almost every other hospital avoids admitting or even transfers to us patients in unstable condition, our doors are open for every patient who seeks medical care. Both inpatient and outpatient care is based on what is best for our patients, not on DRGs (diagnosis related groups) or other reimbursement schemes.

Public hospitals have chronic problems with recruiting and maintaining professional staff. Part of the problem, of course, is attributable to low salaries. The public health care commitment must include realistic professional salaries, such as those listed in the guidelines published by the Association of American Medical Colleges. Part of this cost can be defrayed by medical staff affiliation with medical schools. Such associations can provide salary supplements, stimulate academic activities, and make research facilities available.

Although most of the public hospitals are general hospitals, the exact nature of services should depend on the needs of the community. Unnecessary duplication of highly specialized services such as transplantation, especially if they exist in adjacent institutions, should be avoided. Although contractual agreements with these referral centers are to be encouraged, they must clearly ensure reliable service to the indigent. The indigent are not to be treated as "second-class citizens." Referral institutions must demonstrate their commitment and obligation to the care of indigent patients and treat them as human beings rather than simply a source of easy cash flow.

For public hospitals to survive, it is imperative that they become as efficient as the best hospitals in the private sector. Public hospitals must be governed by community leaders with demonstrated commitment to health care. These leaders must understand that the

primary mission of the public hospital is the provision of health care. Day-to-day hospital operations must be entrusted to nonpartisan health care professionals immune from political vagaries and manipulations. The task of these professionals must be efficient disbursement of funds without influence (patronage) from the contributing governmental bodies.

A number of us did not go to medical school to become wealthy, but rather to learn to diagnose, care for, and heal patients. Public hospitals are unique in providing the milieu where idealists provide gentle care with only a minimal interference from the business of medicine. We hope our society will recognize the service provided by public hospitals and elect to subsidize them. If not, their certain passing will bring to an end one of the noblest endeavors of mankind, caring for our needy brothers and sisters.

Dimitrios G. Spigos, MD
Bradley G. Langer, MD
Cook County Hospital
Chicago, Ill

To the Editor.—In this country, we assert that everyone has a right to health care, yet we do not honor this promise. Instead, we have established a series of unlimited entitlements for some; their enormous cost precludes the government from ensuring access to basic services for the uninsured and underinsured.

The curiosity of Medicare is that eligibility is not gauged by need but by seniority, and the entitlement is open-ended above deductibles that have only recently become significant. Medicare is not an actuarially based program and it draws on general US Treasury subsidy. All benefits are tax free, and decedents' estates go to the heirs, unencumbered.

An alternate to these entitlements would be to abolish Medicare and Medicaid and provide only a very basic package of benefits, but to the population at large, to include the following: (1) defined prenatal, obstetric, and child-care services to the age of 14 years; (2) after this, a limited set of benefits such as 14 days of hospitalization per year, together with defined, limited medical and surgical coverage. A specified number of unused days (possibly 3 per year, subject to a limit) and benefits could be cumulated and applied to subsequent periods of illness. The benefits package would also include the following: (3) after 55 years of age, accrual of 1 extra day per year of hospital benefit and a specified increment in medical and surgical benefits to account for increased incidence of disease; (4) a lifetime cata-

strophic reserve of 15 hospital days plus a specified medical and surgical reserve benefit; and (5) special provisions for medical care for chronic illness.

Those who wished and could afford supplemental coverage would find ready underwriters among the nation's insurers.

The cost of universal coverage would be mitigated by (1) the savings derived from the elimination of the open-ended benefits of Medicare and Medicaid; (2) the fact that relatively little hospital care is needed by the uninsured, since two thirds are believed to be under 24 years; and (3) a tax on currently tax-free health care insurance premiums paid by employers that could yield \$30 billion.

Any reform of Medicare would have to grandfather current beneficiaries and be implemented gradually.

To avoid the perils of a monolithic payment system and ensure uniformity and efficiency, yet maintain a role for the current insurance intermediaries, I point to the successful example of the Federal National Mortgage Association (Fannie Mae), which has greatly helped in ensuring liquidity for the home mortgage loan market. Private capital is utilized with an implicit federal guaranty.

I could conceive of the creation of a National Health Insurance Association (Hallie Mae). Its shareholders would be the government and a consortium of the current insurance carriers, who would name equal numbers of directors. The premiums for insurance benefits would be set on an actuarial basis to fund defined benefits. The government's only role would be to guarantee the marginal risk of inadequate actuarial assumptions for that year with a resetting of rates the following year. A uniform set of guidelines would provide universal standards of review and payment, eliminating the redundancies of multiple payers.

Marcel Frenkel, MD, MBA
University of Illinois
at Chicago
College of Medicine

To the Editor.—Although life and liberty were considered as human rights under the 1776 Declaration of Independence, happiness was specified only as a pursuit, and health care received no mention. It would appear, though, that contemporary societal philosophy considers the pursuit of health care in much the same light as the pursuit of happiness: a greatly desired asset that all may pursue equally, but that persistently remains beyond the grasp of a growing number of persons. This evolution of health care as a luxury item, in a free-enterprise democratic society, has cre-

ated a morally sordid situation that raises the specter of profound class distinction between the insured and the uninsured, the enfranchised and the disenfranchised, the entitled and the deprived, the haves and the have-nots. This process of social cleavage has produced a group of people living in varying degrees of health care comfort and security and a group whose lives are continually exposed to the actual privation of health care services. I am reminded of the opening sentence of *Whatever Happened to the Human Race* by Koop and Schaefer: "Cultures can be judged in many ways, but eventually every nation in every age must be judged by this test: how did it treat people?" It would appear that contemporary American society has somehow missed the mark, should we apply this test to health care.

The 19th-century German pathologist Rudolph Virchow had expressed the view that physicians are the "natural attorneys of the poor" and that "social problems should be solved by them." However, at present, it would be folly to assume that physicians as a group can single-handedly solve this contemporary American health care crisis that denies access to 37 million individuals.

Long-term solutions to this crisis might best be met by the establishment of a congressional advisory commission charged with the responsibility of creating two viable proposals, each of which would guarantee a basic standard of care for all Americans. This commission would need to be formed by ethical and unbiased members of the professions of medicine and law, in conjunction with health care administrators, federal health officers, insurance executives, and legislators. These individuals would need to understand each other, since to further the social progress of health care, great concessions and sacrifices would be required on all sides. In a democratic fashion, one of these two proposals would be chosen by common vote as a ballot item in a national election.

Because the problem is acute and severe, it is urgent that a way is found to break down the barriers of access to care for the uninsured. A reasonable approach would be the drafting of legislation that would apply the Good Samaritan standard to emergency medical care and inpatient hospitalization of indigent and uninsured patients. This would diminish the liability threat to physicians and thereby allow physicians to make themselves available to patients out of purely humanitarian concerns.

Andrew R. Barnosky, DO
Grosse Ile, Mich

1. Koop CE, Schaefer FA. *Whatever Happened to the Human Race*. 2nd ed. Westchester, Ill: Crossway Books; 1983.
2. Ackerknecht EH. *Rudolph Virchow*. Madison: University of Wisconsin Press; 1953.

To the Editor:—The essence of my plan is to allow those practicing physicians and surgeons who wish to do so to deduct from their personal federal income tax returns their usual (or even discounted) charges for care provided to the Medicaid and uninsured population. Federal and state Medicaid outlays in 1989 exceeded \$71 billion (*New York Times*. November 4, 1990:1, 14). If physician-allocated payments are 20% of that total, then approximately \$14 billion is being spent through Medicaid. There are 570 000 practicing physicians and surgeons in the United States; if each who elected to participate provided \$100 000 in "free care" and their federal deductions were discounted to 75% of charges, then \$75 000 per physician per year might be deducted. Assuming the top marginal tax bracket for each one, this would result in approximately \$23 000 in reduced taxes. Multiplied nationwide, a \$13 billion reduction in federal tax revenues would occur. Offsetting this lost revenue would be the elimination of \$14 billion in Medicaid's physician-allocated outlays.

The benefits include increased access "overnight" to physicians who are not providers now but who would be eager to reduce their taxes and, in the process, cover 60 million people for the cost of currently inadequately covering 24 million.

The problems are several. Eligibility through a national registration system, perhaps using Social Security identification, and a method of reporting services to prevent fraud would be necessary. Also, there is no implicit disincentive for use. Patient copayment at the time of service and the use of a "volume performance standard" might be employed. Not least, the costs of medicine for the currently uninsured might be defrayed by an increase in "sin tax" revenues.¹

While salaried physicians would not be directly affected, I have tried to fairly estimate the amount of care that would be provided by participating physicians. It is clear that there would be an unknown number who would continue to choose to receive dollars over deductions. But it is possible that Medicaid patients, given new freedom to choose their physicians, would transfer their care to practices where quality is emphasized over quantity. Certainly the uninsured could be expected to do so. And to the extent that emergency departments and hospital clinics are now providing high-cost episodic care to

these populations, additional current Medicaid dollars would be saved.

Barry L. Farkas, MD
Pittsburgh, Pa

1. Blendon RJ, Donelan K. The public and the emerging debate over national health insurance. *N Engl J Med*. 1990;323:208-212.

The Oath of the Healer

To the Editor:—In the eyes of God and in the presence of my fellow students and teachers, I at this most solemn time in my life do freely take this Oath, whereby I shall pledge to myself and all others the manner in which I shall live the rest of my days.

I shall be ever grateful to my teachers who have planted the seeds of knowledge, which I shall nurture forever. I thank them for allowing me to see the importance of learning and realize that lifelong study is critically important to becoming a Healer.

I realize that on this day, I become a physician for all eternity. I shall strive to be a person of good will, high moral character, and impeccable conduct. I shall learn to love my fellow man as much as I have learned to love the art of healing.

I shall always act in the best interests of my patient and shall never allow personal reward to impact on my judgment. I shall always have the highest respect for human life and remember that it is wrong to terminate life in certain circumstances, permissible in some, and an act of supreme love in others. I shall never promise a cure, as only death is certain, and I shall understand that preserving health is as important as treating disease. When a patient for whom I have been caring dies, I shall have the strength to allow him or her to die with dignity and in peace.

I shall have as a major focus in my life the promoting of a better world in which to live. I shall strive to take a comprehensive approach to understanding all aspects of life. To become the Healer I wish to be, I must expand my thinking and practice from a system of episodic care to one of a preventive approach to the problems of mankind, including the social ills of malnutrition and poverty that plague the world in which we live.

I am not a God and I cannot perform miracles. I am simply a person who has been given the rights and responsibilities to be a Healer. I pledge to myself and all who can hear me that this is what I shall become.

Louis Weinstein, MD
University of Arizona
Health Sciences Center
Tucson

Dr Weinstein recently presented this 21st-century version of the Hippocratic oath in his address to the University of Arizona chapter of Alpha Omega Alpha.—ED.

LOW

3 oz baked red salmon, 5 g fat, 60 mg cholesterol¹



LOWER

3 oz roasted chicken breast, skinless, 3 g fat, 73 mg cholesterol¹



LOWEST

Combined Dairy Total: 2.5 g fat, 14.5 mg cholesterol¹
8 oz skim milk, 4 oz soft-serve vanilla ice milk, 8 oz nonfat yogurt



LOW-FAT DAIRY. IT'S LOWER IN FAT THAN YOU THINK.

For patients concerned about lowering cholesterol, fish and chicken are excellent food choices. But what about dairy? People often have mistaken ideas about how much fat dairy foods contain. Actually, the very low fat and cholesterol content of many dairy foods, combined with their high nutrition, makes them an ideal part of today's prudent diets.

The National Cholesterol Education Program report recommends two servings a day of low-fat or nonfat dairy foods be included in all cholesterol-lowering diets because of their calcium content.² Adequate lifetime calcium intake is associated with greater bone density and lower risk of osteoporosis.³ The three servings of low-fat dairy food shown above provide more than the entire RDA of calcium for most adults.⁴ So, when patients think they have to cut down on dairy to cut down on fat, surprise them. Recommend lean dairy—the high-nutrition, low-fat part of today's cholesterol-lowering diets.

LOW-FAT DAIRY FOR LOW-FAT DIETS.

Nutritive Values of Selected Foods¹

	Fat	Cholesterol	Calcium	Calories
8 oz skim milk	Trace	4 mg	302 mg	85
8 oz nonfat yogurt	Trace	4 mg	452 mg	125
4 oz soft-serve vanilla ice milk	2.5 g	6.5 mg	137 mg	113
3 oz roasted chicken breast, skinless	3 g	73 mg	13 mg	140
3 oz baked red salmon	5 g	60 mg	26 mg	140

References: 1. *Nutritive Value of Foods*, U.S. Department of Agriculture, Home and Garden Bulletin No. 72, 1965, 1989 (Supplement). 2. Report of the National Cholesterol Education Program Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults. *Arch Intern Med* 1988;148:36-69. 3. Cauley JA, Gutai JP, Kuller LH, et al: Endogenous estrogen levels and calcium intakes in postmenopausal women: Relationships with cortical bone measures. *JAMA* 260:3150-3155, 1988. 4. *Recommended Dietary Allowances*, ed 10, National Academy Press, Washington, DC, 1989.

©1990 National Dairy Board

To help motivate your patients—

"Low-Fat Foods for Low-Cholesterol Diets"

Send for a free supply of this patient education pamphlet. Just mail this coupon to National Dairy Board, P.O. Box 1024, Fairview, NJ 07022-9024. Please print or type.

Name _____

Specialty _____

Address _____

City _____ State _____ Zip _____

Low-Fat

JAMA

If you prescribe

ACCUTANE® 10-mg
20-mg
40-mg
capsules
isotretinoin/Roche

don't...
**Until you have
the facts**

CALL
1-800-93-ROCHE
WE'LL SEND YOU A
PREGNANCY PREVENTION PROGRAM
ORGANIZER.

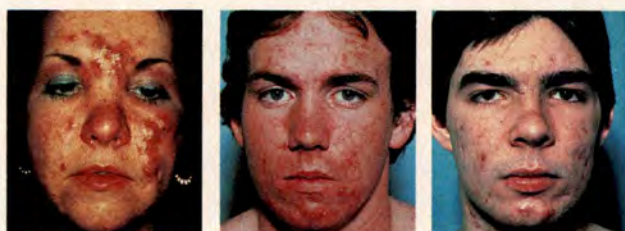


Roche Dermatologics

a division of Hoffmann-La Roche Inc.

Copyright © 1990 by Hoffmann-La Roche Inc. All rights reserved.

FACTS ABOUT careful patient selection



Because of severe adverse reactions associated with its use, only patients with severe recalcitrant cystic acne unresponsive to other standard therapies should be considered as candidates for treatment with Accutane (isotretinoin/Roche). Additionally, they must meet the qualifications and agree to comply with the guidelines for therapy.

FACTS ABOUT the Pregnancy Prevention Program

There are additional specific guidelines that must be followed for females of childbearing potential. These patients must use effective contraception for one month before, during and for one month after completing therapy with Accutane. It is recommended that two reliable forms of contraception be used simultaneously. Use of the Pregnancy Prevention Program for Women on Accutane® (isotretinoin/Roche) can help you counsel and select appropriate candidates. The Qualification Checklist, Consent Form and Self-Evaluation Test are just a few of the elements included in this Program. If you do not have an organizer, please call 1-800-93-ROCHE (1-800-937-6243).



Contraindication and Warning: Major human fetal abnormalities have been reported. Accutane (isotretinoin/Roche) must not be used by females who are pregnant, who may become pregnant while undergoing treatment, or who are unreliable or may not use reliable contraception for one month before treatment, during treatment and for one month after treatment. Accutane is contraindicated in women of childbearing potential unless the patient meets all of the conditions contained in the black box warning on the following pages.

FACTS ABOUT continuous patient monitoring

A thorough pretreatment work-up, including a lipid profile, should be performed for all patients. What's more, laboratory profiles and all clinical findings should be monitored throughout therapy.

The most common side effects are those associated with hypervitaminosis A and include cheilitis and dry skin. Because of significant adverse effects associated with its use, such as pseudotumor cerebri, corneal opacities, hyperostosis, hepatotoxicity, elevation of plasma triglycerides and decreased night vision, Accutane should be reserved for patients with severe cystic acne who are unresponsive to conventional therapy, including systemic antibiotics. Most adverse reactions have been reversible when therapy has been discontinued; however, some have persisted after cessation of therapy. For a complete listing of adverse reactions, see complete product information on the following pages.

FACTS ABOUT the Follow-up Study

The Follow-up Study is being conducted by the Slone Epidemiology Unit, Boston University School of Medicine. It is designed to provide valuable information about the use of Accutane (isotretinoin/Roche) in female patients of childbearing potential. It is important that all female patients who take Accutane enroll in the survey.

Enrollment forms are included in the Pregnancy Prevention Program Organizer and in every Prescription Pak of Accutane. Please encourage all of your female patients to enroll.

Please see complete product information on following pages.

ACUTANE[®]

isotretinoin/Roche

Avoid
Pregnancy



CONTRAINDICATION AND WARNING: Accutane must not be used by females who are pregnant or who may become pregnant while undergoing treatment. There is an extremely high risk that a deformed infant will result if pregnancy occurs while taking Accutane in any amount even for short periods. Potentially all exposed fetuses can be affected.

Accutane is contraindicated in women of childbearing potential unless the patient meets all of the following conditions:

- has severe disfiguring cystic acne that is recalcitrant to standard therapies
- is reliable in understanding and carrying out instructions
- is capable of complying with the mandatory contraceptive measures
- has received both oral and written warnings of the hazards of taking Accutane during pregnancy and the risk of possible contraception failure and has acknowledged her understanding of these warnings in writing
- has had a negative serum pregnancy test within two weeks prior to beginning therapy (it is also recommended that pregnancy testing and contraception counseling be repeated on a monthly basis. To encourage compliance with this recommendation, the physician should prescribe no more than one month supply of the drug.)
- will begin therapy only on the second or third day of the next normal menstrual period

Major human fetal abnormalities related to Accutane administration have been documented: CNS abnormalities (including cerebral abnormalities, cerebellar malformation, hydrocephalus, microcephaly, cranial nerve deficit); skull abnormality; external ear abnormalities (including anotia, microtia, small or absent external auditory canals); eye abnormalities (including microphthalmia); cardiovascular abnormalities; facial dysmorphism; thymus gland abnormality; parathyroid hormone deficiency. In some cases death has occurred with certain of the abnormalities previously noted. Cases of IQ scores less than 85 with or without obvious CNS abnormalities have also been reported. There is an increased risk of spontaneous abortion. In addition, premature births have been reported.

Effective contraception must be used for at least one month before beginning Accutane therapy, during therapy and for one month following discontinuation of therapy even where there has been a history of infertility, unless due to hysterectomy. It is recommended that two reliable forms of contraception be used simultaneously unless abstinence is the chosen method.

If pregnancy does occur during treatment, the physician and patient should discuss the desirability of continuing the pregnancy.

Accutane should be prescribed only by physicians who have special competence in the diagnosis and treatment of severe recalcitrant cystic acne, are experienced in the use of systemic retinoids and understand the risk of teratogenicity if Accutane is used during pregnancy.

DESCRIPTION: Accutane (isotretinoin/Roche), a retinoid which inhibits sebaceous gland function and keratinization, is available in 10-mg, 20-mg and 40-mg soft gelatin capsules for oral administration. Each capsule also contains beeswax, butylated hydroxyanisole, edetate disodium, hydrogenated soybean oil flakes, hydrogenated vegetable oil and soybean oil. Gelatin capsules contain glycerin and parabens (methyl and propyl), with the following dye systems: 10 mg - iron oxide (red) and titanium dioxide; 20 mg - FD&C Red No. 3, FD&C Blue No. 1 and titanium dioxide; 40 mg - FD&C Yellow No. 6, D&C Yellow No. 10 and titanium dioxide. Chemically, isotretinoin is 13-*cis*-retinoic acid and is related to both retinoic acid and retinol (vitamin A). It is a yellow-orange to orange crystalline powder with a molecular weight of 300.44.

CLINICAL PHARMACOLOGY: The exact mechanism of action of Accutane is unknown.

Cystic Acne: Clinical improvement in cystic acne patients occurs in association with a reduction in sebum secretion. The decrease in sebum secretion is temporary and is related to the dose and duration of treatment with Accutane, and reflects a reduction in sebaceous gland size and an inhibition of sebaceous gland differentiation.¹

Clinical Pharmacokinetics: The pharmacokinetic profile of isotretinoin is predictable and can be described using linear pharmacokinetic theory.

After oral administration of 80 mg (two 40-mg capsules), peak blood concentrations ranged from 167 to 459 ng/mL (mean 256 ng/mL) and mean time to peak was 3.2 hours in normal volunteers, while in acne patients peak concentrations ranged from 98 to 535 ng/mL (mean 262 ng/mL) with a mean time to peak of 2.9 hours. The drug is 99.9% bound in human plasma almost exclusively to albumin. The terminal elimination half-life of isotretinoin ranged from 10 to 20 hours in volunteers and patients. Following an 80-mg liquid suspension oral dose of ¹⁴C-isotretinoin, ¹⁴C-activity in blood declined with a half-life of 90 hours. Relatively equal amounts of radioactivity were recovered in the urine and feces with 65% to 83% of the dose recovered. The major identified metabolite in blood is 4-*oxo*-isotretinoin. The mean elimination half-life of this metabolite is 25 hours (range 17-50 hours). Tretinoin and 4-*oxo*-tretinoin were also observed. After two 40-mg capsules of isotretinoin, maximum concentrations of the metabolite of 87 to 399 ng/mL occurred at 6 to 20 hours. The blood concentration of the major metabolite generally exceeded that of isotretinoin after six hours.

When taken with food or milk, the oral absorption of isotretinoin is increased.

The mean $\pm$ SD minimum steady-state blood concentration of isotretinoin was 160 $\pm$ 19 ng/mL in ten patients receiving 40-mg b.i.d. doses. After single and multiple doses, the mean ratio of areas under the blood concentration-time curves of 4-*oxo*-isotretinoin to isotretinoin was 3 to 3.5.

Tissue Distribution in Animals: Tissue distribution of ¹⁴C-isotretinoin in rats after oral dosing revealed high concentrations of radioactivity in many tissues after 15 minutes, with a maximum in one hour, and declining to nondetectable levels by 24 hours in most tissues. After seven days, however, low levels of radioactivity were detected in the liver, ureter, adrenal, ovary and lacrimal gland.

INDICATIONS AND USAGE: **Cystic Acne:** Accutane is indicated for the treatment of severe recalcitrant cystic acne, and a single course of therapy has been shown to result in complete and prolonged remission of disease in many patients.¹⁻³ If a second course of therapy is needed, it should not be initiated until at least eight weeks after completion of the first course, since experience has shown that patients may continue to improve while off drug.

Because of significant adverse effects associated with its use, Accutane should be reserved for patients with severe cystic acne who are unresponsive to conventional therapy, including systemic antibiotics.

CONTRAINDICATIONS: **Pregnancy: Category X.** See boxed **CONTRAINDICATION AND WARNING.** Accutane should not be given to patients who are sensitive to parabens, which are used as preservatives in the gelatin capsule.

WARNINGS:

Pseudotumor cerebri: Accutane use has been associated with a number of cases of pseudotumor cerebri (benign intracranial hypertension). Early signs and symptoms of pseudotumor cerebri include papilledema, headache, nausea and vomiting, and visual disturbances. Patients with these symptoms should be screened for papilledema and, if present, they should be told to discontinue Accutane immediately and be referred to a neurologist for further diagnosis and care.

ACCUTANE[®] (isotretinoin/Roche)

Decreased Night Vision: A number of cases of decreased night vision have occurred during Accutane therapy. Because the onset in some patients was sudden, patients should be advised of this potential problem and warned to be cautious when driving or operating any vehicle at night. Visual problems should be carefully monitored.

Corneal Opacities: Corneal opacities have occurred in patients receiving Accutane for acne and more frequently when higher drug dosages were used in patients with disorders of keratinization. All Accutane patients experiencing visual difficulties should discontinue the drug and have an ophthalmological examination. The corneal opacities that have been observed in patients treated with Accutane have either completely resolved or were resolving at follow-up six to seven weeks after discontinuation of the drug. See **ADVERSE REACTIONS.**

Inflammatory Bowel Disease: Accutane has been temporally associated with inflammatory bowel disease (including regional ileitis) in patients without a prior history of intestinal disorders. Patients experiencing abdominal pain, rectal bleeding or severe diarrhea should discontinue Accutane immediately.

Lipids: Blood lipid determinations should be performed before Accutane is given and then at intervals until the lipid response to Accutane is established, which usually occurs within four weeks. See **PRECAUTIONS.**

Approximately 25% of patients receiving Accutane experienced an elevation in plasma triglycerides. Approximately 15% developed a decrease in high density lipoproteins and about 7% showed an increase in cholesterol levels. These effects on triglycerides, HDL and cholesterol were reversible upon cessation of Accutane therapy.

Patients with increased tendency to develop hypertriglyceridemia include those with diabetes mellitus, obesity, increased alcohol intake and familial history.

The cardiovascular consequences of hypertriglyceridemia are not well understood, but may increase the patient's risk status. In addition, elevation of serum triglycerides in excess of 800 mg/dL has been associated with acute pancreatitis. Therefore, every attempt should be made to control significant triglyceride elevation.

Some patients have been able to reverse triglyceride elevation by reduction in weight, restriction of dietary fat and alcohol, and reduction in dose while continuing Accutane.⁴ An obese male patient with Darier's disease developed elevated triglycerides and subsequent eruptive xanthomas.⁵

Hyperostosis: In clinical trials of disorders of keratinization with a mean dose of 2.24 mg/kg/day, a high prevalence of skeletal hyperostosis was noted. Two children showed x-ray findings suggestive of premature closure of the epiphysis. Additionally, skeletal hyperostosis was noted in six of eight patients in a prospective study of disorders of keratinization.⁶ Minimal skeletal hyperostosis has also been observed by x-rays in prospective studies of cystic acne patients treated with a single course of therapy at recommended doses.

Hepatotoxicity: Several cases of clinical hepatitis have been noted which are considered to be possibly or probably related to Accutane therapy. Additionally, mild to moderate elevations of liver enzymes have been observed in approximately 15% of individuals treated during clinical trials, some of which normalized with dosage reduction or continued administration of the drug. If normalization does not readily occur or if hepatitis is suspected during treatment with Accutane, the drug should be discontinued and the etiology further investigated.

Animal Studies: In rats given 32 or 8 mg/kg/day of isotretinoin for 18 months or longer, the incidences of focal calcification, fibrosis and inflammation of the myocardium, calcification of coronary, pulmonary and mesenteric arteries and metastatic calcification of the gastric mucosa were greater than in control rats of similar age. Focal endocardial and myocardial calcifications associated with calcification of the coronary arteries were observed in two dogs after approximately six to seven months of treatment with isotretinoin at a dosage of 60 to 120 mg/kg/day. In dogs given isotretinoin chronically at a dosage of 60 mg/kg/day, corneal ulcers and corneal opacities were encountered at a higher incidence than in control dogs. In general, these ocular changes tended to revert toward normal when treatment with isotretinoin was stopped, but did not completely clear during the observation period.

In rats given isotretinoin at a dosage of 32 mg/kg/day for approximately 15 weeks, long bone fracture has been observed.

PRECAUTIONS: Information for Patients: Women of childbearing potential should be instructed that they must not be pregnant when Accutane therapy is initiated, and that they should use effective contraception while taking Accutane and for one month after Accutane has been stopped. They should also sign a consent form prior to beginning Accutane therapy. See boxed **CONTRAINDICATION AND WARNING.**

Because of the relationship of Accutane to vitamin A, patients should be advised against taking vitamin supplements containing vitamin A to avoid additive toxic effects.

Patients should be informed that transient exacerbation of acne has been seen, generally during the initial period of therapy.

Patients should be informed that they may experience decreased tolerance to contact lenses during and after therapy.

It is recommended that patients not donate blood during therapy and for at least one month following discontinuance of the drug.

Laboratory Tests: The incidence of hypertriglyceridemia is 1 patient in 4 on Accutane therapy. Pretreatment and follow-up blood lipids should be obtained under fasting conditions. After consumption of alcohol at least 36 hours should elapse before these determinations are made.

It is recommended that these tests be performed at weekly or biweekly intervals until the lipid response to Accutane is established.

Since elevations of liver enzymes have been observed during clinical trials, pretreatment and follow-up liver function tests should be performed at weekly or biweekly intervals until the response to Accutane has been established.

Certain patients receiving Accutane have experienced problems in the control of their blood sugar. In addition, new cases of diabetes have been diagnosed during Accutane therapy, although no causal relationship has been established. Some patients undergoing vigorous physical activity while on Accutane therapy have experienced elevated CPK levels; however, the clinical significance is unknown.

Carcinogenesis, Mutagenesis, Impairment of Fertility: In Fischer 344 rats given isotretinoin at dosages of 32 or 8 mg/kg/day for greater than 18 months, there was an increased incidence of pheochromocytoma. The incidence of adrenal medullary hyperplasia was also increased at the higher dosage. The relatively high level of spontaneous pheochromocytomas occurring in the Fischer 344 rat makes it a poor model for study of this tumor, since the increase in adrenal medullary proliferative lesions following chronic treatment with relatively high dosages of isotretinoin may be an accentuation of a genetic predisposition in the Fischer 344 rat, and its relevance to the human population is not clear. In addition, a decreased incidence of liver adenomas, liver angiomas and leukemia was noted at the dose levels of 8 and 32 mg/kg/day. The Ames test was conducted in two laboratories. The results of the tests in one laboratory were negative while in the second laboratory a weakly-positive response (less than 1.6 $\times$ background) was noted in S. typhimurium TA100 when the assay was conducted with metabolic activation. No dose-response effect was seen and all other strains were negative. Additionally, other tests designed to assess genotoxicity (Chinese hamster cell assay, mouse micronucleus test, S. cerevisiae D7 assay, *in vitro* clastogenesis assay in human-derived lymphocytes and unscheduled DNA synthesis assay) were all negative.

No adverse effects on gonadal function, fertility, conception rate, gestation or parturition were observed at dose levels of 2, 8 or 32 mg/kg/day in male and female rats.

In dogs, testicular atrophy was noted after treatment with isotretinoin for approximately 30 weeks at dosages of 60 or 20 mg/kg/day. In general, there was microscopic evidence for appreciable depression of spermatogenesis but some sperm were observed in all testes examined and in no instance were completely atrophic tubules seen. In studies in 66 human males, 30 of whom were patients with cystic acne, no significant changes were noted in the count or motility of spermatozoa in the ejaculate. In a study of 50 men (ages 17-32 years) receiving Accutane therapy for cystic acne, no significant effects were seen on ejaculate volume, sperm count, total sperm motility, morphology or seminal plasma fructose.

ACCUTANE® (isotretinoin/Roche)

Pregnancy: Category X. See boxed CONTRAINDICATION and WARNING.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because of the potential for adverse effects, nursing mothers should not receive Accutane.

ADVERSE REACTIONS: *Clinical:* Many of the side effects and adverse reactions seen or expected in patients receiving Accutane are similar to those described in patients taking high doses of vitamin A.

The percentages of adverse reactions listed below reflect the total experience in Accutane studies, including investigational studies of disorders of keratinization, with the exception of those pertaining to dry skin and mucous membranes. These latter reflect the experience only in patients with cystic acne because reactions relating to dryness are more commonly recognized as adverse reactions in this disease. Included in this category are dry skin, skin fragility, pruritus, epistaxis, dry nose and dry mouth, which may be seen in up to 80% of cystic acne patients.

The most frequent adverse reaction to Accutane is cheilitis, which occurs in over 90% of patients. A less frequent reaction was conjunctivitis (about two patients in five).

Skeletal hyperostosis has been observed on x-rays of patients treated with Accutane. See **WARNINGS**. Other types of bone abnormalities have also been reported; however, no causal relationship has been established.

Approximately 16% of patients treated with Accutane developed musculoskeletal symptoms (including arthralgia) during treatment. In general, these were mild to moderate and have occasionally required discontinuation of drug. Less frequently, transient pain in the chest has also been reported. These symptoms generally cleared rapidly after discontinuation of Accutane but in rare cases have persisted.

In less than one patient in ten – rash (including erythema, seborrhea and eczema); thinning of hair, which in rare cases has persisted.

In approximately one patient in twenty – peeling of palms and soles, skin infections, non-specific urogenital findings, nonspecific gastrointestinal symptoms, fatigue, headache and increased susceptibility to sunburn.

Accutane has been associated with a number of cases of pseudotumor cerebri, some of which involved concomitant use of tetracyclines. See **WARNINGS**.

The following CNS reactions have been reported and may bear no relationship to therapy – seizures, emotional instability, dizziness, nervousness, drowsiness, malaise, weakness, insomnia, lethargy and paresthesias.

Depression has been reported in some patients on Accutane therapy. In some of these patients, this has subsided with discontinuation of therapy and recurred with reinstitution of therapy.

The following reactions have been reported in less than 1% of patients and may bear no relationship to therapy – changes in skin pigment (hypo- and hyperpigmentation), flushing, urticaria, bruising, disseminated herpes simplex, edema, hair problems (other than thinning), hirsutism, respiratory infections, weight loss, erythema nodosum, paronychia, nail dystrophy, bleeding and inflammation of the gums, abnormal menses, optic neuritis, photophobia, eye lid inflammation, arthritis, anemia, palpitation, tachycardia, lymphadenopathy, sweating, tinnitus and voice alteration.

A few isolated reports of vasculitis, including Wegener's granulomatosis, have been received, but no causal relationship to Accutane therapy has been established.

In Accutane studies to date, of 72 patients who had normal pretreatment ophthalmological examinations, five developed corneal opacities while on Accutane (all five patients had a disorder of keratinization). Corneal opacities have also been reported in cystic acne patients treated with Accutane. See **WARNINGS**. Dry eyes and decrease in night vision have been reported and in rare instances have persisted. See **WARNINGS**. Cataracts and visual disturbances have also been reported.

Accutane has been temporally associated with inflammatory bowel disease. See **WARNINGS**. As may be seen with healing cystic acne lesions, an occasional exaggerated healing response, manifested by exuberant granulation tissue with crusting, has been reported in patients receiving therapy with Accutane. Pyogenic granuloma has also been diagnosed in a number of cases.

Laboratory: Accutane therapy induces changes in serum lipids in a significant number of treated subjects. Approximately 25% of patients had elevation of plasma triglycerides. Five out of 135 patients treated for cystic acne and 32 out of 298 total subjects treated for all diagnoses showed an elevation of triglycerides above 500 mg percent. About 16% of patients showed a mild to moderate decrease in serum high density lipoprotein (HDL) levels while receiving treatment with Accutane and about 7% of patients experienced minimal elevations of serum cholesterol during treatment. Abnormalities of serum triglycerides, HDL and cholesterol were reversible upon cessation of Accutane therapy.

Approximately 40% of patients receiving Accutane developed elevated sedimentation rates, often from elevated baseline values.

From one in ten to one in five patients showed decreases in red blood cell parameters and white blood cell counts, elevated platelet counts, white cells in the urine, increased alkaline phosphatase, SGOT, SGPT, GGTP or LDH. See **WARNINGS: Hepatotoxicity**.

Less than one in ten patients showed proteinuria, microscopic or gross hematuria, elevated fasting blood sugar, elevated CPK, hyperuricemia or thrombocytopenia.

Dose Relationship and Duration: Cheilitis and hypertriglyceridemia are usually dose-related.

Most adverse reactions were reversible when therapy was discontinued; however, some have persisted after cessation of therapy. (See WARNINGS and ADVERSE REACTIONS.)

Overdosage: The oral LD₅₀ of isotretinoin is greater than 4000 mg/kg in rats and mice and is approximately 1960 mg/kg in rabbits. Overdose has been associated with transient headache, vomiting, facial flushing, cheilosis, abdominal pain, headache, dizziness and ataxia. All symptoms quickly resolved without apparent residual effects.

DOSAGE AND ADMINISTRATION: The recommended dosage range for Accutane is 0.5 to 2 mg/kg given in two divided doses daily for 15 to 20 weeks. In studies comparing 0.1, 0.5 and 1 mg/kg/day, it was found that all doses provided initial clearing of disease but there was a greater need for retreatment with the lower dose(s).

It is recommended that for most patients the initial dose of Accutane be 0.5 to 1 mg/kg/day. Patients whose disease is very severe or is primarily manifest on the body may require up to the maximum recommended dose, 2 mg/kg/day. During treatment, the dose may be adjusted according to response of the disease and/or the appearance of clinical side effects – some of which may be dose-related.

If the total cyst count has been reduced by more than 70 percent prior to completing 15 to 20 weeks of treatment, the drug may be discontinued. After a period of two months or more off therapy, and if warranted by persistent or recurring severe cystic acne, a second course of therapy may be initiated. Contraceptive measures must be followed for any subsequent course of therapy.

Accutane should be administered with food.

ACCUTANE® (isotretinoin/Roche)

HOW SUPPLIED: Soft gelatin capsules, 10 mg (light pink), imprinted ACCUTANE 10 ROCHE. Boxes of 100 containing 10 Prescription Paks of 10 capsules (NDC 0004-0155-49).

Soft gelatin capsules, 20 mg (maroon), imprinted ACCUTANE 20 ROCHE. Boxes of 100 containing 10 Prescription Paks of 10 capsules (NDC 0004-0169-49).

Soft gelatin capsules, 40 mg (yellow), imprinted ACCUTANE 40 ROCHE. Boxes of 100 containing 10 Prescription Paks of 10 capsules (NDC 0004-0156-49).

Store at 59° to 86°F; 15° to 30°C. Protect from light.

REFERENCES:

1. Peck GL, Olsen TG, Yoder FW, Strauss JS, Downing DT, Pandya M, Butkus D, Arnaud-Battandier J: Prolonged remissions of cystic and conglobate acne with 13-cis-retinoic acid. *N Engl J Med* 300:329-333, 1979.
2. Farrell LN, Strauss JS, Stranieri AM: The treatment of severe cystic acne with 13-cis-retinoic acid. Evaluation of sebum production and the clinical response in a multiple-dose trial. *J Am Acad Dermatol* 3:602-611, 1980.
3. Jones H, Blanc D, Cunliffe WJ: 13-cis-retinoic acid and acne. *Lancet* 2:1048-1049, 1980.
4. Katz RA, Jorgensen H, Nigra TP: Elevation of serum triglyceride levels from oral isotretinoin in disorders of keratinization. *Arch Dermatol* 116:1369-1372, 1980.
5. Dicken CH, Connolly SM: Eruptive xanthomas associated with isotretinoin (13-cis-retinoic acid). *Arch Dermatol* 116:951-952, 1980.
6. Ellis CN, Madison KC, Pennes DR, Martel W, Voorhees JJ: Isotretinoin therapy is associated with early skeletal radiographic changes. *J Am Acad Dermatol* 10:1024-1029, 1984.
7. Strauss JS, Rapini RP, Shalita AR, Konecky E, Pochi PE, Comite H, Exner JH: Isotretinoin therapy for acne: Results of a multicenter dose-response study. *J Am Acad Dermatol* 10:490-496, 1984.

PATIENT INFORMATION/CONSENT:

Accutane must not be used by females who are pregnant or who may become pregnant while undergoing treatment.

IMPORTANT INFORMATION and WARNING: Accutane can cause severe birth defects if it is taken when a woman is pregnant. There is an extremely high risk that you will have a severely deformed baby if:

- you are pregnant when you start taking Accutane,
 - you become pregnant while you are taking Accutane,
 - you do not wait at least one month after you stop taking Accutane before becoming pregnant.
- It is recommended that you and your doctor schedule an appointment every month to repeat the pregnancy test and check your body's response to Accutane. For your health and well-being, be sure to keep your appointments as scheduled.

THE CONSENT:

My treatment with Accutane has been personally explained to me by Dr. _____ The following points of information, among others, have been specifically discussed and made clear:

1. I, _____ (Patient's Name) understand that Accutane is a very powerful medicine used to treat severe cystic acne that did not get better with other treatments including oral antibiotics. INITIALS: _____
2. I understand that I must not take Accutane if I am or may become pregnant during treatment. INITIALS: _____
3. I understand that severe birth defects have occurred in babies of women who took Accutane during pregnancy. I have been warned by my doctor that there is an extremely high risk of severe damage to my unborn baby if I am or become pregnant while taking Accutane. INITIALS: _____
4. I have been told by my doctor that effective birth control (contraception) must be used for at least one month before starting Accutane, all during Accutane therapy and for at least one month after Accutane treatment has stopped. My doctor has recommended that I either abstain from sexual intercourse or use two reliable kinds of birth control at the same time. I have also been told that any method of birth control can fail. INITIALS: _____
5. I know that I must have a blood test that shows I am not pregnant within two weeks before starting Accutane, and I understand that I must wait until the second or third day of my next normal menstrual period before starting Accutane. INITIALS: _____
6. My doctor has told me that I can participate in the "Patient Referral" program for an initial free pregnancy test and birth control counseling session by a consulting physician. INITIALS: _____
7. I also know that I must immediately stop taking Accutane if I become pregnant while taking the drug and immediately contact my doctor to discuss the desirability of continuing the pregnancy. INITIALS: _____
8. I have carefully read the Accutane patient brochure, "Important information concerning your treatment with Accutane," given to me by my doctor. I understand all of its contents and have talked over any questions I have with my doctor. INITIALS: _____
9. I am not now pregnant, nor do I plan to become pregnant for at least 30 days after I have completely finished taking Accutane. INITIALS: _____
10. My doctor has told me that I can participate in a survey concerning Accutane use in women by completing an additional form. INITIALS: _____

I now authorize Dr. _____ to begin my treatment with Accutane. INITIALS: _____

Patient, Parent or Guardian _____

Date _____

Address _____

Telephone Number _____

I have fully explained to the patient, _____, the nature and purpose of the treatment described above and the risks to women of childbearing potential. I have asked the patient if she has any questions regarding her treatment with Accutane and have answered those questions to the best of my ability.

Physician _____

Date _____

REVISED: MAY 1990

P.I. 0590

ACCUTANE DOSING BY BODY WEIGHT

Body Weight		0.5 mg/kg	Total Mg/Day 1 mg/kg	2 mg/kg
kilograms	pounds			
40	88	20	40	80
50	110	25	50	100
60	132	30	60	120
70	154	35	70	140
80	176	40	80	160
90	198	45	90	180
100	220	50	100	200



Roche Dermatologics

a division of Hoffmann-La Roche Inc.

340 Kingsland Street
Nutley, New Jersey 07110-1199

STRONG

ORUDIS® (ketoprofen)

50 mg and 75 mg capsules

**FAST • STRONG • NONADDICTING
PAIN RELIEF**

ORUDIS® (ketoprofen)

BRIEF SUMMARY OF PRESCRIBING INFORMATION:

Consult the package literature for full prescribing information.

CONTRAINDICATIONS: Hypersensitivity to ORUDIS. Do not give if aspirin or other NSAIDs have induced asthma, urticaria, or other allergic reactions since fatal, anaphylactic reactions have been reported in such patients.

WARNINGS: RISK OF GI ULCERATION, BLEEDING, AND PERFORATION WITH NSAID THERAPY: Serious GI toxicity (e.g., bleeding, ulceration, perforation) can occur at any time, with or without warning symptoms during chronic therapy. Minor upper GI problems are common early in therapy but physicians should remain alert for ulceration and bleeding even without previous GI-tract symptoms. Occurrence of serious GI toxicity is about 1% after 3-6 months of therapy, 2-4% after a year. Patients should be informed of signs and symptoms of serious GI toxicity and what to do if it occurs. Studies have failed to identify a patient subset not at risk. Prior history of serious GI events and other risk factors of peptic ulcer disease (e.g., alcoholism, smoking, etc.) are the only factors associated with increased risk. Elderly and debilitated patients tolerate ulceration or bleeding less well and have more fatal GI events. High doses probably carry a greater risk. Consider benefit versus risk (of GI toxicity) in prescribing higher recommended doses.

PRECAUTIONS: Chronic administration of NSAIDs causes nephritis in mice and rats. Interstitial nephritis and nephrotic syndrome have been reported with ORUDIS since it has been marketed abroad. A second form of renal toxicity is seen in patients having reduced renal blood flow or blood volume, where prostaglandins support the maintenance of renal blood flow. In these patients NSAIDs cause a dose-dependent decrease in prostaglandin synthesis and renal blood flow which may precipitate overt renal failure. Patients with impaired renal or hepatic function, heart failure, those on diuretics, or the elderly are at greatest risk. Discontinuation of NSAIDs typically leads to recovery. Since ketoprofen is primarily eliminated by the kidneys and its pharmacokinetics altered by renal failure, patients with impaired renal function should be closely monitored to identify a needed dosage reduction. Borderline elevations of liver-function tests may occur in up to 15% and may progress, remain unchanged, or disappear with continued therapy. Patients with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, should be evaluated further as serious hepatic reactions, including jaundice, have been reported. SGPT (ALT) is the most sensitive indicator of liver dysfunction. To reduce or eliminate steroid dosage during therapy, go slowly and look closely for any evidence of adverse effects, including adrenal insufficiency and exacerbation of arthritis. Anemia is common in rheumatoid arthritis and sometimes aggravated by NSAIDs. Patients with initial hemoglobin of 10 g/dL or less should have hemoglobin values determined frequently during chronic therapy. Peripheral edema was seen in about 2% of ORUDIS patients, so use caution in patients with fluid retention, hypertension, or heart failure.

Information for Patients: Physicians should discuss potential risks (See Warnings, Precautions, Adverse Reactions) and likely benefits with patients especially when other drugs offer an acceptable alternative for less serious conditions. Advise patients what to do if they experience major or minor GI symptoms. Minor GI symptoms are sometimes prevented by giving ORUDIS with food, milk, or antacids. (Note that antacids do not affect bioavailability; food and milk affect rate but not extent of absorption.) Advise patients not to take aspirin while on ORUDIS.

Drug Interactions:

Diuretic: Patients on diuretics are at greater risk of renal failure secondary to decreased renal blood flow due to prostaglandin inhibition (see Precautions).

Warfarin: Because prostaglandins are important in hemostasis and ketoprofen also affects platelet function, concurrent ORUDIS/warfarin therapy requires close monitoring.

Methotrexate: Co-administration of methotrexate and NSAIDs has caused methotrexate toxicity due to displacement of protein-bound methotrexate.

Lithium: Increased steady-state plasma lithium levels. Lithium levels should be monitored when given with ORUDIS.

Concurrent use of aspirin or probenecid with ketoprofen is not recommended.

Drug/Laboratory Test Interactions:

Effect on Blood Coagulation: ORUDIS decreases platelet adhesion and aggregation and can prolong bleeding time by about 3 to 4 minutes. There is no significant change in platelet count, prothrombin time, partial thromboplastin time, or thrombin time.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of carcinogenic or mutagenic potential. No impairment of reproduction or fertility seen in male rats. Female rats had decreased number

of implantation sites. Rats and dogs had inhibition of, or abnormal, spermatogenesis at high doses, and dog and baboon testes decreased in weight.

Teratogenic Effects: Pregnancy Category B: No effects seen in mice. Maternally toxic doses in rabbits produced embryotoxicity but not teratogenicity.

Use not recommended in pregnancy.

Labor and Delivery, Nursing Mothers, Pediatric Use: Use is not recommended.

ADVERSE REACTIONS: Incidence of common ADRs (>1%) was obtained from 835 patients on ORUDIS® (ketoprofen) in double-blind trials lasting 4 to 54 weeks.

Minor GI side effects predominated; more upper GI symptoms noted than lower GI. In controlled clinical trials peptic ulcer or GI bleeding noted in <1% of 1,076 patients; open-label studies in 1,292 patients had rate >2%. Peptic ulceration incidence in patients on NSAIDs depends on many risk factors, e.g., age, sex, smoking, alcohol use, diet, stress, concomitant drugs such as aspirin and corticoids, plus dose and duration of treatment with NSAIDs. Next in frequency were CNS side effects such as headache, dizziness, or drowsiness. Incidence of some ADRs appears dose-related (see Dosage and Administration in package insert).

In double-blind trials, 233 patients on ORUDIS had fewer minor GI complaints, tinnitus and hearing impairment, fluid retention, and minor liver function test abnormalities than 228 aspirin-treated patients.

Incidence >1% (Probable Causal Relationship):

Digestive: Dyspepsia (11.5%), nausea,* abdominal pain,* diarrhea,* constipation,* flatulence,* anorexia, vomiting, stomatitis. **CNS:** Headache,* dizziness, CNS inhibition (i.e., pooled reports of somnolence, malaise, depression, etc.) or excitation (i.e., insomnia, nervousness, dreams, etc.).* **Special Senses:** Tinnitus, visual disturbance. **Skin and Appendages:** Rash. **Urogenital:** Impairment of renal function (edema, increased BUN)* signs or symptoms of urinary-tract irritation.

*Side effects with incidence greater than 3%.

Incidence <1% (Probable Causal Relationship):

Digestive: Appetite increase, dry mouth, eructation, gastritis, rectal hemorrhage, melena, fecal occult blood, salivation, peptic ulcer, GI perforation, hematemesis, intestinal ulceration. **CNS:** Amnesia, confusion, impotence, migraine, paresthesia, vertigo. **Special Senses:** Conjunctivitis, conjunctivitis sicca, eye pain, hearing impairment, retinal hemorrhage and pigmentation change, taste perversion. **Skin and Appendages:** Alopecia, eczema, pruritus, purpuric rash, sweating, urticaria, bullous rash, exfoliative dermatitis, photosensitivity, skin discoloration, onycholysis. **Body as a Whole:** Chills, facial edema, infection, pain, allergic reaction, anaphylaxis. **Cardiovascular:** Hypertension, palpitation, tachycardia, congestive heart failure, peripheral vascular disease, vasodilation. **Hemic:** Hypocoagulability, agranulocytosis, anemia, hemolysis, purpura, thrombocytopenia. **Metabolic and Nutritional:** Thirst, weight gain, weight loss, hepatic dysfunction, hyponatremia. **Musculoskeletal:** Myalgia. **Respiratory:** Dyspnea, hemoptysis, epistaxis, pharyngitis, rhinitis, bronchospasm, laryngeal edema. **Urogenital:** Menometrorrhagia, hematuria, renal failure, interstitial nephritis, nephrotic syndrome.

Incidence <1% (Causal Relationship Unknown):

(listed as information to alert physicians) **Digestive:** Buccal necrosis, ulcerative colitis. **CNS:** Dysphoria, hallucination, libido disturbance, nightmares, personality disorder. **Body as a Whole:** Septicemia, shock. **Cardiovascular:** Arrhythmias, myocardial infarction. **Endocrine:** Diabetes mellitus (aggravated). **Metabolic and Nutritional:** Jaundice, Urogenital: Acute tubulopathy, gynecostasia.

OVERDOSEAGE: Reports are rare. Symptoms usually mild or absent. Vomiting and drowsiness have occurred. With large doses, empty stomach by gastric lavage or induced vomiting and use required support therapy. ORUDIS is dialyzable; thus, hemodialysis may remove circulating drug or assist in renal failure.

Dosage and Administration: **Rheumatoid Arthritis and Osteoarthritis:** Starting dose 75 mg t.i.d. or 50 mg q.i.d. (range 150-300 mg daily). **Mild-to-Moderate Pain and Dysmenorrhea:** 25-50 mg q6-8h p.m. A larger dose may be tried, but doses above 75 mg have not been shown to give added analgesia.

How supplied: 25, 50, and 75 mg capsules. **Keep tightly closed. Dispense in tight container.** CI 3827-3 May 16, 1990

**WYETH-AYERST
LABORATORIES**
Philadelphia, PA 19101

© 1990, Wyeth-Ayerst Laboratories

Adv. #60089

The Uninsured From Dilemma to Crisis

Emily Friedman

SOME health policy issues are like bad pennies; despite repeated efforts to resolve them, they keep coming back. Probably no health policy issue of this century (with the possible exception of insuring and structuring long-term care, which affects far fewer people) has proven as intractable as access to acute care for Americans who lack coverage for the cost of that care. It was a problem for most Americans at one time; after the introduction of private insurance early in the 20th century, it became a problem more of specific groups, notably the elderly and the poor. Coverage of those who were uninsured was a policy centerpiece (largely unrealized) of President Harry S Truman's administration. With the passage of Medicaid and Medicare in 1965, it was thought the issue was largely resolved.

The uninsured, however, like the proverbial poor, seem always to be with us. In fact, their numbers have grown significantly in the past 15 years. Proposals for solutions are rife, but consensus on how to attack the problem has proven, to say the least, elusive. Nevertheless, the dilemma of the uninsured has become a crisis, affecting all aspects of the health care system and many aspects of society.

WHO IS UNINSURED?

Most estimates place the number of Americans lacking public or private coverage between 31 and 36 million.^{1,4}

Ms Friedman is a contributing editor for *Hospitals*, *Medical World News*, and the *Healthcare Forum Journal* and is a contributing writer for *Health Business*, *Health Progress*, and *JAMA*.

Reprint requests to 917 W Wolfram, Chicago, IL 60657 (Ms Friedman).

The 1987 National Medical Expenditure Survey found that 47.8 million people lacked insurance for all or part of 1987, with between 34 and 36 million uninsured on any given day and 24.5 million uninsured throughout that year.^{1,2}

The US Bureau of the Census found that, from the first quarter of 1986 to the last quarter of 1988, 63.6 million people lacked coverage for at least 1 month and 31.5 million lacked it in the final quarter of 1988.³ The Employee Benefit Research Institute reported that, in 1988, 33.3 million Americans had no private insurance and were ineligible for public coverage.⁴ Even the more conservative figures represent a significant increase over the 26.6 million uninsured reported in the 1977 National Health Care Expenditures Study.⁵

When examined further, the statistics provide a troubling picture. Although most figures discussed herein are from the 1987 National Medical Expenditure Survey, virtually all other studies have found substantially the same patterns.

In terms of age, those who are 19 to 24 years old are most likely to be uninsured; 20.3% of this group were uninsured for all of 1987, and another 18.2% were uninsured for part of the year.^{1,2} Children younger than 18 years were the next most likely to lack coverage, with nearly one in four uninsured either all or part of the year. The National Center for Health Statistics reports that, in 1988, 17% of children under 18 years had neither private insurance nor Medicaid coverage.⁶ Given the importance of preventive and early intervention care to the health of the young, these rates are a cause of concern.

Of those aged 25 to 54 years, 19.8% were uninsured all or part of the year, as were 13.6% of those aged 55 to 64 years.^{1,2} (Medicare covers virtually all Americans 65 years or older.) The fact that more than one in eight Americans who are 55 to 64 years old lack coverage at least part of the year is disturbing, in that this group faces a much higher risk of serious health problems than do younger Americans.

Racial and ethnic differences affect rates of coverage. Of non-Hispanic whites, 18.6% were uninsured for all or part of 1987, as were 29.8% of black Americans and 41.4% of Hispanic Americans.^{1,2} Studies using differing methodologies going back as far as 1978 have shown that Hispanic Americans are the most likely to be uninsured of any ethnic group.⁷ As Hispanics represent the fastest-growing ethnic population group in the nation, their consistently low rate of coverage is a potential warning of worse yet to come.

Men are slightly more likely to be uninsured than women; 23.8% of men were uninsured for at least part of 1987 as opposed to 21% of women.^{1,2} This undoubtedly reflects the fact that virtually all men, regardless of their income, are excluded from eligibility for Medicaid. Also, Medicaid now covers low-income pregnant women with incomes up to 185% of the poverty line, as well as many mothers with dependent children. Furthermore, women are disproportionately represented in the poverty population, so, to the extent that Medicaid covers that population, more women than men are likely to be protected.

Income level is also associated with lack of coverage. The uninsured repre-

sented 47.5% of those with incomes below the poverty line in 1987, 45% of those with incomes between poverty and 125% of poverty, 36.7% of those with incomes from 125% to 200% of poverty, 17.8% of those with incomes 200% to 400% of poverty, and 8.8% of those with incomes above 400% of poverty.

The proportion of uninsured varies by state, depending on several factors, including the level of Medicaid coverage in the state, the demographics of the population, insurance practices, overall income, the nature of employment, and state health policy. The National Medical Expenditure Survey found lack of insurance highest in the South (27.4% of the population were uninsured at least part of the year) and West (27.2%) and lowest in the Midwest (16.7%) and Northeast (15.7%).¹² The Employee Benefit Research Institute found that lack of coverage ranged from less than 10% in Massachusetts, Pennsylvania, Michigan, Wisconsin, and Iowa to more than 25% in Louisiana, Texas, and New Mexico.⁴ However, with so much coverage tied to employment and with states changing Medicaid and other health policies constantly, these figures are volatile.

MANY UNDERINSURED AS WELL

If the policy debate is to be framed accurately in terms of issues of coverage and access, a second group, the underinsured, must also be mentioned. This population is more difficult to define, because it faces risks that are more specific. That is, a patient's diagnosis can determine whether coverage is sufficient or not, and surveys of whether a person has coverage at all are unlikely to reveal such gaps in protection. Where a person receives care, how long the person is a patient, what types of treatment are required, and whether there is a dollar or time limit to coverage all affect the sufficiency of insurance. Nevertheless, a 1985 estimate, based on data projected from the 1977 National Health Care Expenditures Study, was that 26% of the nonelderly population, or approximately 56 million people in 1984, were "inadequately protected against the possibility of large medical bills."¹³

To this population, whose major problem is insufficient overall coverage, could be added those whose insurance precludes coverage of a given condition or imposes a waiting period before such coverage becomes operative (which is often the case with pregnancy). Also included are those who are covered by Medicaid but lack access to physician care because of physician reluctance to treat Medicaid clients and those who,

insured or not, face difficulty in obtaining obstetric care because of the decreasing number of obstetricians willing to accept new patients (American College of Obstetrics and Gynecology, news release, May 3, 1988).⁹⁻¹²

Physician resistance to treating such patients has been ascribed to many causes, including low and delayed Medicaid payments, fears of malpractice litigation, paperwork, cultural or language problems, noncompliance, and other factors, including racial discrimination.¹³ Certainly, the prospect of low or nonexistent payment is a disincentive to most providers.

The total number of uninsured and underinsured, even if the latter group has not been sufficiently identified, could easily represent one in every four Americans on any given day.

EROSION OF MEDICAID

How such a large number of Americans came to be at risk, through lack of coverage or lack of access or both, is a challenging question. Theoretically, coverage of health care costs is available to virtually all Americans through one of four routes: Medicare for the elderly and disabled, Medicaid for low-income women and children (and some men) and those with certain disabilities, employer-subsidized coverage at the workplace, or self-purchased coverage for those ineligible for the previous three. However, as many as 10 million more Americans were uninsured at least part of the year in 1987 than in 1977. What happened?

Of the four routes to coverage, Medicare has aged best. A universal enfranchisement that is neither means tested nor related to the workplace, Medicare each year covers more Americans for most acute care. Beneficiaries' out-of-pocket costs remain high, however, and coverage for long-term care remains skimpy, especially with the repeal of Medicare catastrophic care coverage.

Medicaid, however, has suffered a more equivocal fate. Although passed by Congress, Medicaid is a state-level program, with each state defining income levels and other standards of eligibility and the federal government subsidizing a certain portion of expenses, depending on the state's overall wealth. Thus, coverage has always varied from state to state, with Northern states and some Western states offering more generous benefits than Southern and other states.

In the early 1980s, both the federal and state governments sought to control or reduce Medicaid expenditures in the face of tax cuts, growing costs, and reduced federal funds for the program.

This led to freezes and reductions in both eligibility and provider payments. The result was a basically stable number of beneficiaries despite an increase in the poverty population. Because of Medicaid's categorical approach to eligibility, certain groups—most low-income men and childless couples, for example—do not qualify. However, there was little growth between 1980 and 1985 even among potentially eligible populations.

Medicaid's fortunes began to change in the late 1980s, as Congress mandated Medicaid coverage of pregnant women (at least for pregnancy-related services) and young children with incomes as high as 185% of the poverty line. These mandates were resisted by many states because they required substantial increases in spending; by 1990, the governors of 49 states had asked Congress to refrain from further mandates—a request Congress did not heed as it increased child eligibility that year.

Medicaid faces another vexing problem: Although families receiving Aid to Dependent Children constitute between 70% and 75% of the Medicaid population, three fourths of Medicaid expenses go to the costs of care for the aged, blind, and disabled, especially patients in nursing homes. Indeed, Medicaid has, perhaps in violation of the intent of Congress, become a form of long-term care reinsurance for the Medicare population. In the absence of either major growth in affordable private long-term care insurance or inclusion under Medicare of more extensive long-term care coverage, the stress on the Medicaid program is likely to continue.

As a result of the rather tangled path it has traveled, Medicaid never covered the entire poverty population and was estimated to cover only 38.7% of that group in 1983.¹⁴ By 1989, it was estimated that only 40% of the poverty population was covered by the program.¹⁵ Although congressional mandates may boost that figure somewhat, the majority of the poor remain unprotected by the program that was designed to cover them.

THE WORKPLACE CONNECTION

The third route to coverage—employer-subsidized insurance for workers and often for dependents—has also seen serious erosion in recent years. This was the cornerstone of health insurance in the past—appropriate for a nation steeped in the Puritan work ethic and even more appropriate in an age in which labor shortages of many types are looming. The unspoken agreement was that, if a person was employed, he or she would receive health insurance bene-

fits, subsidized to some degree by the employer or at least priced lower than individual coverage to reflect the fact that the subscriber belonged to an employee group.

However, the workplace is no longer a guarantor of coverage, if it ever was. The National Medical Expenditure Survey found that, in 1987, of the uninsured population, 46.4% were working adults, 6.8% were nonworking spouses of working adults, and 23.6% were children of working adults.¹² In other words, 76.8% of the uninsured either were employed or were nuclear-family dependents of the employed.¹² The Employee Benefits Research Institute found that, in 1988, 85% of the uninsured were either workers or family members of workers.⁴

The employed uninsured are unevenly distributed. The National Medical Expenditure Survey found that they were more likely to work part time or to be self-employed and to work in settings with fewer than 100 workers, especially in settings with fewer than 25 workers. In settings with fewer than 10 employees, 26.3% of workers were uninsured.¹²

Service industries, as opposed to manufacturing industries, were more likely to employ uninsured workers, reflecting both the lack of a tradition of employment-based coverage in the service sector and a much lower level of unionization, which is usually associated with generous health benefits.¹² The Employee Benefit Research Institute, using March 1989 data from the Bureau of the Census, found similar patterns.⁴

Thus, the majority of the uninsured are tied, directly or through family relationships, to a workplace that is no longer an automatic source of insurance. In some cases the employer does not offer coverage. In others the coverage is offered but is not affordable or is not purchased by the employee. In still others the employee acquires coverage for himself or herself but not for a dependent spouse or children. All of these possibilities are more likely in small business settings.

Employers are not necessarily the villains. Insurance products for small business are both limited and expensive. According to the General Accounting Office, small businesses have little ability to spread risk over a large number of employees, which results in higher premiums, should an employee incur large costs.¹⁶

Small businesses also face a far greater likelihood of premiums being based on experience rating rather than on community rating. Small employee groups are also seen by insurers as a higher risk, which means that, com-

pared with larger employee groups, they are subject to more exclusions, medical testing of applicants, and denials of coverage because of health status and are less able to absorb the significant increases in premium prices that have been the pattern of the past two decades.¹⁶

Indeed, a major element in the crisis of the uninsured is the simple fact that health care costs a great deal more than it once did. The US Department of Health and Human Services reported in 1990 that, for 1989 (the last year for which final data were available), national health care spending increased 11.1%, to \$604.1 billion (US Dept of Health and Human Services, press release, December 20, 1990). This meant that US spending on health care from 1980 through 1989 increased 128%. Insurance premiums reflect those costs plus insurers' own expenses and margins, leading to average increases in premiums that reached 18% in 1989.¹⁷ In addition to increasingly selective attitudes toward risk on the part of insurers, insurance is becoming less affordable simply because the cost of the services it covers is doubling every few years.

If small businesses face problems in offering and retaining coverage, the individual insurance market faces collapse. This is the population that insurers characterize as the highest risk, requiring disproportionate administrative costs and usually proving unprofitable.

Medical underwriting, experience rating, refusal to cover those deemed "uninsurable," cancellation of policies on short notice, and high premiums are common if not almost universal barriers for those seeking individual coverage. As a result, for an individual unable to qualify for group or public coverage, obtaining affordable insurance is dependent on having a sufficiently high income and very good health status. This, needless to say, eliminates many of those who are most likely to need coverage, that is, those who are poor, sick, and/or unable to acquire workplace-based insurance.

The working uninsured are a complex population, and even data-based generalities are dangerous. Despite the small-business focus, many of the uninsured work for large firms, as is the case with agricultural and seasonal workers. Some of the uninsured simply choose not to acquire coverage, although they represent a small minority of this population. Some are eligible for either public or private coverage but are unaware of this and thus have never sought it. Although most of the uninsured are

poor or near poor, some are middle-class people denied coverage by virtue of poor health status or "risky" jobs. It is a highly heterogeneous population, with multiple reasons for being at risk. Nevertheless, it is safe to say that the original notion of tying coverage to employment is working less well with each passing day. In times of economic downturn, when higher unemployment produces more medical indigence and lower tax revenues to fund public programs such as Medicaid, the fragility of the entire concept of linking coverage to employment becomes painfully clear.

WHY A CRISIS NOW?

Most crises are born of a series of small events that one day reach critical mass. So it has been with the uninsured. The framers of Public Law No. 89-97, which brought Medicare and Medicaid into being in 1965, believed that universal health insurance was just around the corner, yet it failed to materialize.¹⁸ When it was reported in 1980 that 26.6 million Americans lacked coverage, a response might have been expected but was not forthcoming. A large number of efforts—expansion of Medicaid; coverage of children by Blue Cross and Blue Shield plans; state insurance pools for the "uninsurable"; and coverage experiments funded by states, localities, and private sources—have attempted to address at least part of the problem, yet it continues unabated.

Has the issue reached critical mass? If not, it is well on the way to doing so, for at least five reasons.

1. Although coverage is not the sole determinant of health status, it is a key factor in improved health, as Medicaid data have demonstrated.¹⁹ Although availability of care does not guarantee it will be used,^{20,21} the uninsured have been shown to receive less care, even if they are able to gain entry to the system.²² It is thus not unreasonable to assume that medical indigence is associated with lack of care and poorer health status. In other words, coverage does make a difference.

2. The health care system is suffering damage as a result of being asked (implicitly) to provide care for the uninsured who cannot pay. Because the uninsured often do not have access to physicians in private offices, health maintenance organizations, or other settings, they disproportionately seek care at hospitals. As an anonymous physician once observed, "They do not go to the doctor; they go to the institution."

Nevertheless, it was estimated in 1985 that physicians provided \$9.2 billion in bad debt and charity care in 1982.²³ A 1988 survey by the American

Medical Association found that physicians reported \$6.3 billion in uncollected revenues that year (Socioeconomic Monitoring Service data, American Medical Association, 1988).

According to the American Hospital Association, hospitals in 1989 provided \$11.1 billion in uncompensated care, an increase of \$7.2 billion over 1980.²⁴ Although not all of this can be attributed to care of the medically indigent, most of it does represent such services. However, not all hospitals are equally affected, because the uninsured are not equally distributed. Teaching hospitals, Veterans Affairs hospitals, public hospitals, children's hospitals, and inner-city hospitals are harder hit, and the load among even these facilities is unequal.²⁵ Staggering under the pressure of the acquired immunodeficiency syndrome epidemic, drug abuse, increased trauma, problem pregnancies, and other results of social change and social neglect, most municipal and some private hospitals are barely coping with emergency care and are hardly able to provide timely—let alone elective—services to the uninsured. Rural hospitals face problems of their own, because of chronic low occupancy; one or two long stays by uninsured patients can doom a facility.

Care is often theoretically available through public or private clinics and other settings, both funded and voluntary. However, these are often so overloaded that access is illusory. In Chicago, Ill, for example, as of November 1990, pregnant women had to wait 125 days for an appointment with a physician at a public clinic (*Chicago Tribune*, November 25, 1990:\$4, p 1).

Thus, a minority of US hospitals carry the majority of the burden of the uninsured, and that burden is growing. As a result, there is quarreling among hospitals, between hospitals and physicians, and between hospitals and governments as the cost of treating the uninsured increases while subsidies (especially philanthropy) decline. With emergency departments in some cities (including New York, NY) now the most common source of inpatient admissions, and with nearly 100 hospitals closing each year,²⁶ more and more hospitals are facing a horrendous choice: caring for all the uninsured and failing, or turning at least some of them away and surviving.

As a result, serious questions are being asked about the level of charity care that hospitals, clinics, physicians, and other providers should be expected to provide. Certainly, those entities holding charitable tax exemptions should be expected to provide some indigent care, although the requirement for such care

was removed from the federal tax code in 1969.

Should some hospitals have case loads that are 10% or 20% uninsured while others have virtually no uninsured patients? Should indigent care provided by hospitals be subsidized largely by a haphazard patchwork of subsidies, tax levies, adjustments in Medicare and Medicaid payments, and other partial measures that are neither reliable nor well organized?

3. Another factor contributing to calls for action on the uninsured is the increasingly uncomfortable situation of employers. The number of employers who do offer coverage is dropping (*Business Week*, November 26, 1990:187), which is not surprising in view of the increasing cost of insurance and the voluntary nature of the arrangement.

The playing field is becoming more unequal: Some employers offer coverage, some do not. Some offer a lavish benefit package, others offer a lean one. Some are self-insured and, because of a federal statutory prohibition, cannot be required by states to offer mandated benefits; others must provide a wide range of benefits that raise the cost of coverage considerably. Whether one has coverage no longer depends on *whether* one is employed but rather on *where* and *by whom*.

Employer discomfiture is being exacerbated by calls for mandated employer coverage of all workers and even of dependents. Only the state of Hawaii has succeeded in legally requiring that most people working more than 19 hours per week be covered by employer-subsidized insurance.

The state of Massachusetts has passed legislation requiring most employers to provide a certain level of coverage to workers or else pay an assessment; it is scheduled to go into effect in 1992. However, the law is being challenged in court, and the newly elected governor of the state has proposed repeal of the employer mandate.²⁷ Other states are interested in some form of employer mandate, but the federal prohibition on state regulation of self-insured employers under the Employee Retirement Income and Security Act makes it extremely difficult to require these firms to participate (Hawaii has a federal waiver). Employers, anxious about being forced to subsidize expensive benefits but concerned about uninsured workers and unequal benefits, are also seeking a solution.

The uninsured have become a workplace issue in another way. The youngest baby boomer is now 26 years old; nearly 20 years of large numbers of en-

try-level workers have given way to a much leaner supply. If health insurance benefits are not offered by employers, what will lure new workers? Asking women, for example, to give up Medicaid coverage to become uninsured workers seems questionable in terms of incentives. In a labor-short era, the role of workplace benefits is critical.

4. Another force for a solution is the interrelationship of the uninsured and health care costs. On the one hand, it can be argued that, if health care for the more than 200 million Americans who have at least some coverage is so expensive, we cannot afford to cover the 31 to 37 million who have no coverage. On the other hand, it can be argued that the uninsured represent significant hidden costs. After all, most of them do receive care, at least when their lives are at stake or when they are having babies. Given their compromised or nonexistent access to primary and preventive care, however, their point of entry into the system is too often a hospital emergency department. The timing of their seeking care is also often a case of too little, too late.

As a result, conditions that could have been prevented or treated in a cost-effective manner—from measles to carcinoma of the breast to diabetes—become emergencies, with both higher costs and worse outcomes. This, in turn, distorts staffing and practice in emergency services, leading, in the words of a health policy analyst many years ago, to primary care in the emergency setting, equivalent to tending a rose garden with a bulldozer. It is hardly a cost-effective use of health care resources.

The larger economic issue is that most of us pay the hidden costs of medical indigence, one way or another. Every insurance premium includes some of the costs of care of the uninsured. Even self-insured employers pay part of that cost. Paying patients subsidize nonpaying patients. The society as a whole pays the price of prenatal care that is not given, immunizations that are not provided, cancers that are not detected, diabetes that is not monitored, mental illness that is not discovered. The uninsured can be very expensive.

5. The last factor driving the need for action may appear secondary in a health care economy that has become hard edged. Nevertheless, issues of ethics and equity are as important and powerful as the economic or logistical issues. Foremost among these is whether a democracy that thinks of itself as the moral hope of the world can justify grave inequalities in access to health care, which in most countries is considered an essential human need.

It is often pointed out that, among developed nations, only the United States and South Africa have not implemented universal access to care. This is overstated; there are holes in every safety net. However, the holes in our net are more numerous and yawn deeper and wider than in many less-wealthy nations.

We claim that other nations ration care because the insured must wait sometimes; however, in our nation, the uninsured can wait forever. We claim that ours is the best health care system in the world; however, if tens of millions of Americans have little or no access to care, the claim rings hollow.

In addition, a health care system that has become too selective in terms of whom it treats carries with it the seeds

of its own destruction. Our system has been built—properly, in my opinion—on a tradition of pluralism, public guarantees and private largesse, and both institutionalized and voluntary giving; a tradition of faith, hope, and charity.

Should the public lose faith in that arrangement (and in recent years we have seen evidence of such a loss of confidence^{28,29}), the very basis of the health care system is in jeopardy. Health care providers can hold themselves out as morally superior, but if they are not seen as such by the populace, voluntarism and autonomy can easily be replaced by fiat.

Many of our health status indicators are lagging or beginning to lag behind those in the rest of the developed world—and, indeed, in some of the

Third World. Pressure is building to give up on our current system and develop another, based on the Canadian or some other centralized model.^{28,29} The moral standing of American health care is on the line. We must produce a workable answer to the crisis of the uninsured, or all of us—health care providers and the society alike—could suffer the terrible and long-term consequences of inaction.

It is to that search for solutions that this issue of THE JOURNAL has been dedicated.

I acknowledge the assistance provided in the preparation and revision of this article by William H. Dendle III, MPH, Irene Fraser, PhD, and Alan Sager, PhD.

References

- Short PF, Monheit A, Beauregard K. *National Medical Expenditure Survey: A Profile of Uninsured Americans: Research Findings 1*. Rockville, Md: National Center for Health Services Research and Health Care Technology Assessment; 1989.
- Short PF. *National Medical Expenditure Survey: Estimates of the Uninsured Population, Calendar Year 1987: Data Summary 2*. Rockville, Md: National Center for Health Services Research and Health Care Technology Assessment; 1990.
- Nelson C, Short K. *Health Insurance Coverage, 1986-88*. Washington, DC: US Dept of the Census; 1990. Current Population Reports, Household Economic Studies, Series P-70, No. 17.
- Chollet D, Foley J, Mages C. *Uninsured in the United States: The Nonelderly Population Without Health Insurance, 1988*. Washington, DC: Employee Benefit Research Institute; 1990.
- Kasper JA, Walden DC, Wilensky GR. *Who Are the Uninsured?* Hyattsville, Md: National Center for Health Services Research; 1980. National Health Care Expenditures Study, Data Preview 1.
- Bloom B. *Health Insurance and Medical Care: Health of Our Nation's Children, United States, 1988*. Hyattsville, Md: National Center for Health Statistics; 1990. Advance Data From Vital and Health Statistics of the National Center for Health Statistics, No. 188.
- Treviño FM, Moyer ME, Valdez RB, Stroup-Benham CA. Health insurance coverage and utilization of health services by Mexican Americans, mainland Puerto Ricans, and Cuban Americans. *JAMA*. 1991;265:233-237.
- Farley P. Who are the underinsured? *Milbank Mem Fund Q*. 1985;63:476-503.
- Friedman E. Doctors, doctors everywhere: and patients who can't get care. *Health Business*. January 4, 1991;6:1T-2T.
- Medicaid participation declines. *SMS Rep*. September 1989;3:1-3.
- Yudkowsky BK, Cartland JDC, Flint SS. Pediatrician participation in Medicaid: 1978 to 1989. *Pediatrics*. 1990;85:567-577.
- Access to normal obstetrical care: a disturbing trend. *SMS Rep*. January 1989;3:3.
- Fossett JW, Perloff JD, Kletke PR, Peterson JA. Medicaid patients' access to office based obstetricians. Presented at the 118th Annual Meeting of the American Public Health Association; October 3, 1990; New York, NY.
- Gornick M, Greenberg JN, Eggers P, Dobson A. Twenty years of Medicare and Medicaid: covered populations, use of benefits, and program expenditures. *Health Care Financ Rev*. 1985;7(annual suppl):13-59.
- Swartz K, Lipson D. *Strategies for Assisting the Medically Uninsured*. Washington, DC: Urban Institute and the Intergovernmental Health Policy Project; 1989.
- Health Insurance: Availability and Adequacy for Small Businesses*. Hearings before the Subcommittee on Antitrust, Monopolies, and Business Rights of the Senate Committee on the Judiciary, 101st Cong, 2nd Sess (1990) (testimony of Mark V. Nadel, associate director for national and public health issues, Human Resources Division, General Accounting Office).
- Cerne F. Rate decreases unlikely despite health insurers' healthy profits. *Am Hosp Assoc News*. November 5, 1990;26:8.
- Friedman E. *The Problems and Promises of Medicaid*. Chicago, Ill: American Hospital Association; 1977.
- Friedman E. Medicare and Medicaid at 25. *Hospitals*. August 5, 1990;64:38-54.
- Aday LA. Access to what? for whom? *Health Manage Q*. Fourth Quarter 1990;12:18-22.
- Piper JM, Ray WA, Griffin MR. Effects of Medicaid eligibility expansion on prenatal care and pregnancy outcome in Tennessee. *JAMA*. 1990;264:2219-2223.
- Hadley J, Steinberg EP, Feder J. Comparison of uninsured and privately insured hospital patients: condition on admission, resource use, and outcome. *JAMA*. 1991;265:374-379.
- Ohsfeldt R. Uncompensated medical services provided by physicians and hospitals. *Med Care*. 1985;23:1338-1344.
- Medicaid Underpayments and Hospital Care for the Poor: A Fact Sheet*. Chicago, Ill: American Hospital Association; 1991.
- Friedman E. Hospital uncompensated care: crisis? *JAMA*. 1989;262:2975-2977.
- Friedman E. Analysts differ over implications of more hospital closings than openings since 1987. *JAMA*. 1990;264:310-314.
- Massachusetts health care law threatened. *Med Health*. February 11, 1991;45:2.
- Blendon R. Three systems: a comparative survey. *Health Manage Q*. 1989;11:2-10.
- Blendon R, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in 10 nations. *Health Aff*. Summer 1990;9:185-192.

Health Insurance Values and Implementation in the Netherlands and the Federal Republic of Germany

An Alternative Path to Universal Coverage

Bradford L. Kirkman-Liff, DrPH

The health care systems in the Netherlands and the Federal Republic of Germany are based on a set of values that involve mutual obligations between private parties. These obligations are realized through systems incorporating private practice physicians, community and church- and municipality-affiliated hospitals, and nonprofit and for-profit insurers. The underlying values and implementation approaches in these systems provide an alternative to the adoption of a Canadian-style health insurance system. A discussion that focuses on "obligations" rather than "rights" may be a more useful approach for the design of reforms of the American health system in the 1990s. Such a discussion would focus on the mutual responsibility of all parties to create and maintain a universal private health care system.

(*JAMA*. 1991;265:2496-2502)

THE UNITED States is again in a period of intense discussion and debate about national health insurance and universal coverage, with several commissions and nearly every health policy advocate proposing various forms of universal coverage in the expectation that the United States will enact such a program within the next several years.¹⁻⁹ The motivation for much of this discussion is the serious problem of lack of access to care for the uninsured.¹⁰⁻¹⁶

Many observers of the American health care system have pointed to the Canadian system involving universal fee-for-service insurance, administered by a single regional entity, as one approach to fundamental reform of the American system.¹⁷⁻²² But that is not the only approach that exists. This article will first examine the values underlying the health care structures of two European industrialized nations: the Netherlands and Germany. While some of the

reimbursement structures within these systems can provide inspiration for changes in the American system, more important, a review of the underlying philosophical values demonstrates some resonances with traditional American health care values. Values are relevant to a discussion of schemes for universal coverage. A lack of value congruence between a proposed approach and overarching American social and cultural values will lead to failure. Such a lack of congruence was one contributor to the failure of health planning, in the form of certificate-of-need legislation and health systems agencies, to obtain lasting political support.²³ Following the discussion of values, the structure of the health care systems in the Netherlands and Germany will be reviewed; the interested reader can consult any number of more detailed descriptions.²⁴⁻³² Last, the article will draw from the experiences of the Netherlands and Germany to develop different recommendations for health reform in this nation.

The description of values in the German and Dutch health care systems was elucidated from more than 200 structured interviews that used a mix of open- and closed-ended questions posed by the author to physicians (30), hospital administrators (30), insurance fund

managers (60), health policy analysts (40), patient advocates (20), and governmental officials (20) during 18 months of residence over a 3-year period (August 1987 through August 1990). Three fourths of the interviews occurred in the Netherlands, one fourth in Germany. The interview protocol was based on an extensive literature review, initially revised with the assistance of university faculty in the respective countries and further revised as the interviews progressed. Some individuals were interviewed as many as three times. Interviewee selection occurred through three mechanisms. First, government ministries arranged interviews with representative physicians and managers. Second, university faculty were interviewed and asked for their assistance in contacting other physicians and managers. Third, all interviewees were asked for names of other persons to be interviewed. In this manner, a broad cross-section of participants was interviewed. The interviews were part of a broader investigation into physician and hospital reimbursement, cost-control mechanisms, and policy reforms in the two nations, and some of the substantive results have been reported.³³⁻³⁶ An extensive variety of documents were reviewed as well, but no written explications of the value structures were found in those materials.

HEALTH CARE VALUES IN THE NETHERLANDS AND THE FEDERAL REPUBLIC OF GERMANY

From an American perspective, "rights" are rarely discussed in the health sector in the Netherlands or Germany. Rather, the discussion focuses on "obligations" and the ways in which participants in the health sector are bound together by these mutual, interlocking

From the School of Health Administration and Policy, College of Business, Arizona State University, Tempe, and Department of Health Care Policy and Management, College of Medicine, Erasmus University Rotterdam, the Netherlands.

The views expressed are the author's own and not necessarily those of any of the sources of support.

Reprint requests to School of Health Administration and Policy, College of Business, Arizona State University, Tempe, AZ 85287-4506 (Dr Kirkman-Liff).

obligations. It can be argued that as there are no rights without corresponding and concomitant obligations, and vice versa, the two concepts can be used interchangeably. However, a discussion of rights in health care will often focus on how society can meet the demands of individuals, while a discussion of obligations in health care can focus on the responsibilities of individuals to their society.

This system of obligations starts with an obligation on physicians, hospitals, and other providers to provide medically necessary care for all patients. This obligation is seen as being central to the concept of an ethical professional and institution. At the same time, it is an obligation that retains a role for professional determination of need, as opposed to unlimited patient demand. This obligation immediately translates into an obligation on patients: they are obligated to pay for care that they receive. However, the fact that patients may or may not fulfill their obligation does not allow a provider to refuse medically necessary care: it is only by accepting the obligation to treat the needs of all patients that the providers can impose on the patients the obligation to pay. Again, the obligation to assist all patients without regard to financial resources is seen as a key element to professionalism.

It has been recognized in Europe since the early years of this century that it is not possible for low- and moderate-income patients to pay for their medical care costs out of their own pocket, especially hospital costs. Given their obligation to pay for care, low- and moderate-income patients are therefore obligated to purchase health insurance. While the providers benefit from the public's obligation to purchase insurance, as it ensures that the cost of care will be paid, the insured also benefit, because it strengthens the obligation on the providers to treat all patients. High-income patients are not obligated to purchase insurance. They are expected to purchase health insurance, but they have the right to put themselves at financial risk, keeping in mind that they are still obligated to pay for all care that they receive.

It is also widely recognized that it is not possible for low- and moderate-income patients to be able to pay for the costs of their health insurance out of their own pocket. Their obligation to purchase such insurance translates into an obligation on employers to assist their employees in purchasing this insurance. Given that all persons must purchase insurance, employers are obligated to consider this in the determina-

tion of the employee's wages and benefits. Over the last 100 years, assistance in the purchase of health insurance has been seen as an essential component of a minimum compensation package. However, such assistance never exceeds one half of the cost of the family premium, as the primary obligation to pay for insurance is on the employee. Relative to the United States, employees in the Netherlands and Germany pay a far higher proportion of the premium costs of their health insurance, although the out-of-pocket costs are substantially less (equivalent to the experience of many HMO [health maintenance organization] members).

The obligation of employers to assist in the purchase of insurance also applies to retirement funds and unemployment funds, and it is through this mechanism that the elderly and poor are covered by health insurance. This system of obligated assistance for low- and moderate-income employees, retirees, and the unemployed has led to the expectation that employers should assist their high-income employees in the purchase of their health insurance, if the employee chooses to purchase insurance. The reasoning is that employers should treat all employees relatively equally in terms of nonwage benefits, and as employers are making a contribution to the health insurance costs for low- and moderate-income employees, they should make a similar contribution to the health insurance costs incurred by their high-income employees.

These obligations on the public, their employers, and other providers of funds to purchase insurance result in obligations on the insurers. As everyone is obligated to purchase insurance, insurers are obligated to insure everyone. In practice, the obligation to accept all moderate- and low-income persons means that medical underwriting, exclusion of preexisting conditions, exclusion of small employers, and exclusion of employers in certain industries are considered unethical and have been incorporated into the self-regulating structures that apply to the obligatory insurance scheme. The result is community rating, based on income, with the premium shared between the employer and employee on an equal basis. The requirement that all persons must purchase insurance also results in an obligation that the insurers must operate at the lowest possible costs. The result is that the health insurance funds are non-profit, private sector organizations, regulated as a public utility.

These obligations and the self-regulatory pressure also mean that the insurers must make every effort to pay the

lowest possible fees to the medical providers and to ensure that hospital budgets are not excessive. The fact that one half of the costs is paid by the employees leads to equal pressure from labor unions and employers for low costs. These fees and budgets are established through regional and national negotiations between organizations representing the insurers and providers. The providers are obligated to take part in the negotiations, as they cannot refuse to treat the obligatorily insured population, and the insured population is obligated to pay premiums that will in turn be paid to the providers. The outcome of the negotiation process is a set of fees, rates, and budgets for all providers. Providers are required to accept these fees and budgets, again in the spirit of the mutual obligations. Except for minor copayments, providers cannot charge patients additional amounts.

The obligation on the providers to accept the negotiated rates translates into an additional obligation on the insurers: they must contract with all medical providers. All providers must treat the patients of the insurers, and so the insurers must pay the costs for all providers. Insurers cannot selectively contract, and they must pay all providers the same rates. Last, the system of obligations as a whole places the responsibility for much of the regulation of the health insurance system on the private sector. All parties involved in these obligations—physicians, hospitals, labor unions, employers, sickness funds—are obligated to participate in self-regulation of the system.

Within this structure of obligations is the value of solidarity. The concept of solidarity serves as a mechanism to promote cohesiveness within and between the disparate groups of participants within the health insurance system. Solidarity helps justify the mandatory inclusion of all low- and moderate-income employees in the insurance system (although the obligation to pay providers is paramount). Solidarity promotes the inclusion of retirees and the unemployed in the same funds as the currently employed. Solidarity helps justify the voluntary payment by the employer of a portion of the high-income employees' insurance premium. Solidarity promotes the bargaining between providers and insurers and discourages efforts at selective contracting or boycotts.

The Figure displays the relationships among these major obligations. The obligations tie all participants together in a private sector structure that ensures that all members of the society receive care, all providers receive compensation for their efforts, all people with

limited means can afford insurance, insurers receive adequate revenue, and the administrative cost of the system is kept as low as is reasonable.

Of course, there is on-going debate on the strength and implementation of this structure. Insurers, especially in the Netherlands, do question their obligation to contract with all providers. There is a strong feeling that marginally competent physicians are tolerated within the health system: the threat of contract termination could encourage more physicians to constantly improve their clinical skills. The employer organizations express support for greater use of copayments to deter unnecessary utilization, which is opposed by unions and consumer groups.

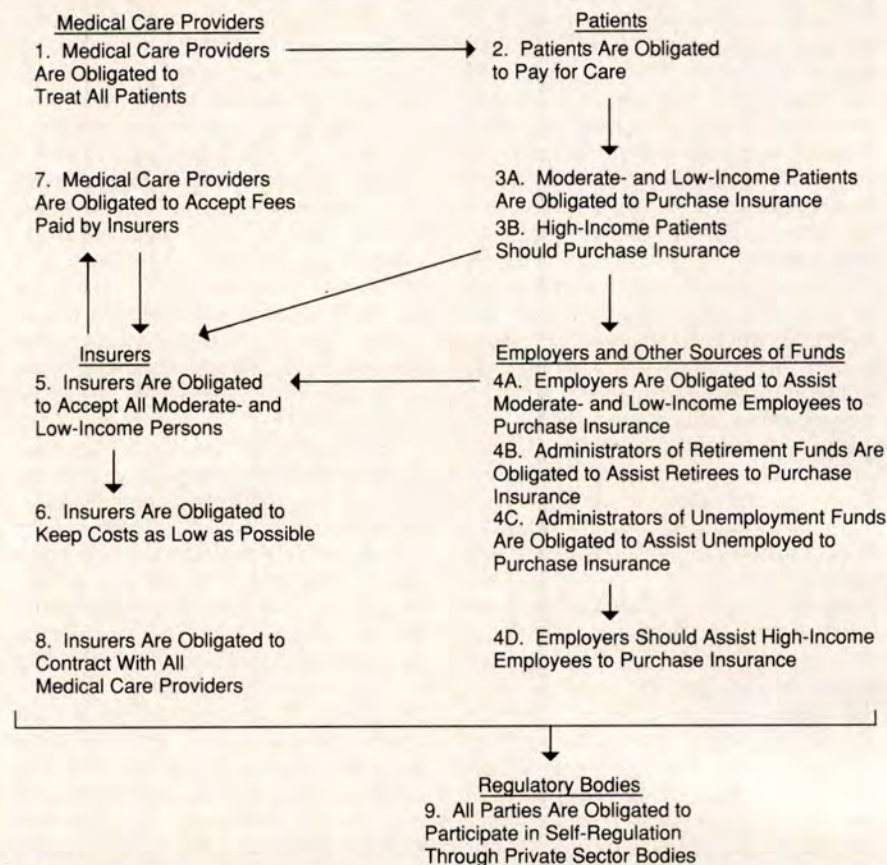
An interesting aspect of this structure of obligations is that it casts a different light on the issue of the uninsured in the American system. In their view, the lack of universal insurance is unfair to medical providers and to those who have insurance, because it forces providers to either refuse care to the uninsured or shift costs to those who have insurance. The first option was seen as violating the obligations of providers, while the second was seen as an unfair burden on the patients with insurance, who are obligated to pay the costs. In their view, it is the providers and the insured who should be demanding that the uninsured be brought into the system.

REALIZATION OF VALUES IN HEALTH INSURANCE STRUCTURES

These values are put into action by the functioning health insurance systems in the two nations. Each will be described to demonstrate how the values affect structure and to describe differences in the application of the values. An overview of physician and hospital reimbursement mechanisms will be presented; more details of those aspects are in the previously referenced sources.

Health Insurance in the Netherlands

The described value structure draws a distinction between those who are obligated to purchase insurance and those who can choose to put themselves at risk of medical expenses. This feature is most prominent in the Netherlands, where the structure of obligations takes form in three distinct components of the current health financing and insurance system. Some 62% of the public obtains health services through sickness funds in the Netherlands. These individuals and their families fall below defined income levels (approximately \$30 000 in 1991) and must obtain insurance



Structure of obligations in Dutch and German health care.

through one of approximately 35 regional funds. Individuals must join a fund that serves the community in which they live; although many communities are served by more than one fund, there are areas where only one fund operates. The administrators of the funds are obligated to accept all applicants and cannot exclude preexisting conditions, perform medical underwriting, or deny coverage to any category of employer.

The sickness funds receive their revenue based on their incurred costs for medical services from a single, national "general fund." The funds' administrative costs are prospectively budgeted on a per-enrollee basis. The cost of the general fund is paid half by employees and half by employers, retirement funds, and unemployment funds using a nationally uniform income-adjusted premium. The structure produces strong incentives for the administrators of the funds to carefully manage their internal costs, while avoiding the need to directly collect premiums from persons who frequently live in a different region than is covered by the fund for the area in which they work. In the Netherlands the application of solidarity results in a general prohibition against the creation of single-employer

sickness funds for those who are covered under the obligatory scheme.

The remaining 38% of the population purchases private health insurance from nonprofit and for-profit insurers. As this is a voluntary choice, these insurers do not operate under any social obligations, and so the exclusion of preexisting conditions and medical underwriting is not uncommon. Private insurance is available with a variety of deductibles (some as high as \$1000), copayments (such as 20% of charges), and premium rebates for nonuse. The premium is based on the age and sex of each insured individual, although there is a government-sanctioned program to partly cross-subsidize the costs of the elderly who are privately insured by surcharges on the nonelderly who are privately insured. Employees who purchase private health insurance receive a contribution from their employer toward these costs that is equal to the employer payment for the sickness fund members. This contribution is not obligatory in a legal sense, but represents an extension of the solidarity value to upper-income employees. In other words, upper-income employees have half of their premium paid by their employer to promote solidarity between the private-

ly insured and sickness fund insured. This solidarity-motivated tradition is so strong that employers perceive that they are under a social obligation as strong as their legal obligation to pay half of the sickness fund premiums.

About one third of the private insurance is purchased under collective contracts, where all of the high-income employees of one employer receive group rates from one insurer. Insurers are free to refuse to write collective contracts for small employers or employers in selected industries. However, many private health insurance executives expressed a sense of solidarity with small employers with high-income employees: they make every effort to develop affordable collective contracts. Large employers can establish private health insurance companies that will cover only their high-income employees, a form of self-insurance. While there is a legal distinction between those economic groups who are obligated to purchase insurance (to fulfill their payment obligation to providers) and those who can choose to be uninsured, solidarity stimulates private mechanisms to cover the high-income employees, while social mechanisms cover the rest of the population in the Netherlands.

Separate from both the sickness funds and private insurance is the Exceptional Medical Expenses Act, which covers the costs of long-term care, maternal and child health services, mental health care, and physical and mental retardation programs on a national basis. This Act was created in the 1960s because no member of the society—regardless of wealth or income—could afford to be at risk for these catastrophic costs. These services are no longer covered by either sickness funds or private insurance since the creation of the Act. It was also believed that removal of these costs from the scope of benefits of the private insurance system would support the continued operation of the dual system: maintenance of a voluntary, unregulated system for the upper-income employees would be feasible if the scope of benefits to be covered by that system was reduced.

The Exceptional Medical Expenses Act is financed by government contributions and mandatory income-adjusted employer (for employees) and personal (for self-employed) contributions and is administered at the regional basis by the sickness funds. It represents an extension of the obligation to pay providers and the obligation to purchase insurance for catastrophic care.

The sickness funds are regulated by the Sickness Fund Council, which consists of representatives from employ-

ers, labor unions, patient advocacy groups, hospitals, physicians, the sickness funds themselves, and the government. The council is technically not a part of government but is endowed with legal powers to monitor the funds. The position of the Sickness Fund Council is a clear example of an outgrowth of the value that universal health care insurance is an obligation within the private sector. The regulation of the health insurance structure in turn becomes a responsibility for the private sector, with legal authority for this self-regulation extended by government. The Sickness Fund Council also oversees the operation of the Exceptional Medical Expenses Act. The private health insurers are not regulated beyond the general regulations imposed on all insurers in the Netherlands, reflecting the voluntary nature of health insurance.

A key element in the structure in the Netherlands is the definition of medically necessary care. This is also defined by the Sickness Fund Council, which develops a broad definition of the service benefits to be provided by the sickness funds. Furthermore, with the advice from the Health Care Council (a body of appointed physicians), it reviews advances in medical technology and evaluates the inclusion of experimental procedures in the sickness fund benefit structure.

This health insurance structure interacts with the physicians and hospitals in the Netherlands. Physicians can be divided into two major groups: general practitioners and specialists. (It should be noted that general practitioners in the Netherlands complete a ≥ 2 -year residency and are equivalent to family medicine practitioners in the United States.) The general practitioners in the Netherlands fulfill a "gatekeeper" role: they control all referrals to specialists and to hospitals. Patients are free to choose their primary care physician. Patients—regardless of form of insurance—must have a referral from a general practitioner before consulting a specialist. Almost all specialists are hospital based. Patients can choose their specialist and hospital once they have a referral from a general practitioner, but patients usually follow recommendations to see particular specialists made by their general practitioner. Specialists are required to contact the general practitioner before referring the patient on to a second specialist (such as an internist referring a patient to a surgeon). Specialists are also expected to send the patient back to the general practitioner after the episode of illness. The general practitioners are paid on a fee-for-service basis for patients with

private insurance and on a capitation basis for patients in the sickness funds. Specialists are paid on a fee-for-service basis by both sickness funds and private insurers.

Hospitals in the Netherlands are all nonprofit institutions. The majority are community or church affiliated; there are a small number of municipal hospitals. Compared with those in the United States, Dutch hospitals are much larger (in terms of the average number of beds in each hospital) and serve larger geographical areas. This is a result of more than 40 years of hospital planning, which has focused on developing efficient regional resource allocations. All hospitals have large ambulatory care clinics, as almost all specialists are hospital based. Hospitals negotiate a global revenue budget each year with the sickness funds and major private insurers in their area. These budgets involve estimates of the volume of services to be provided to the population (admissions, patient-days, ambulatory surgery, specialist outpatient visits, and so forth). These volumes are combined with a set of negotiated cost factors to generate the revenue budget. This in turn generates per-day charges paid by the insurers. If the actual revenue is less than the revenue budget, due to lower than projected utilization, the hospital receives the additional revenue in the next year. If the actual revenue is higher than budget, due to higher-than-expected utilization, the surplus revenue must be paid back to the insurers. These comparisons of actual and budgeted revenue are independent of the costs of the hospital: the hospital is responsible for costs in excess of the actual revenues and can keep any surpluses if actual revenues are greater than costs. This structure creates strong incentives for operational efficiency and for substitution of ambulatory care (especially ambulatory surgery) for inpatient admissions.

The Dutch system is not without faults. The structure of obligations can be a straitjacket that prevents innovations and experimentation. The three systems of insurance (sickness funds, private insurance, and the Exceptional Medical Expenses Act) create administrative complexities. Coordination of services is difficult for the elderly, the chronically ill, and other groups with unique health problems. Community and regional planning efforts are thought to be excessively bureaucratic and slow. Health care inflation in the Netherlands (while lower than in the United States) was higher than general inflation in the early 1980s. Various kinds of social support services used by the chronically ill are provided by local

government, out of direct tax revenue, and are not included under the insurance systems.

In response to these issues, a government-appointed panel of experts put forward in 1987 a set of proposals that have been partly adopted by the government. Briefly, these proposals call for the integration of the three forms of insurance into one system, with social support services used by the chronically ill added to the benefit.^{30,37} These "care insurers" will receive per capita budgets from a central fund, along with nominal copremiums from members. The insurers will be allowed to compete on the basis of the nominal copremiums. The insurers will be allowed to selectively contract with providers, with selection based as much on quality as on marginal costs. The price-setting negotiations will set maximum prices, and discounts will be allowed. The utilization review activities of the funds will be strengthened, and more discharge planning and case management activities will be undertaken. Many of the elements in the proposals are based on the concepts of Enthoven's "Consumer Choice Health Plan" and on the Medicare Competitive Medical Plan program.^{28,38} However, the change in government from a center-right coalition to a center-left coalition has resulted in a slowing in the implementation of the plan.

Health Insurance in the Federal Republic of Germany

The structure in Germany is significantly different from that seen in the Netherlands. Some 92% of the public obtains health services through sickness funds in Germany. As in the Netherlands, these individuals and their families generally fall below defined income levels. However, the income level is much higher than in the Netherlands (approximately \$50 000 in 1991), and so a higher proportion of the population is in the obligatory system. In addition, individuals over this income level can voluntarily choose to be in the sickness funds, an option no longer available in the Netherlands. In these ways the German system represents the same values as in the Netherlands, but with a different definition as to those who should be obligated to purchase insurance, based on a different judgment about the application of solidarity. From this perspective, the German system contains more solidarity than the Dutch system.

Another significant difference is the large number and variety of funds in Germany. There are currently approximately 1100 funds, only some of which are organized on a local basis, as in the

Netherlands, to serve the general population. Others serve only specialized groups of workers, such as those in the craft unions, agriculture, mining, or the merchant marine. Large employers are allowed to establish factory sickness funds, which serve all of their employees across the entire country in one fund. There are also several national substitute funds, which tend to enroll white-collar and self-employed persons who are free to choose their fund and do not clearly belong in another fund.

Sickness funds receive their revenue from their members. The costs of each fund are covered by an income-adjusted family premium. The members pay half of this premium, and the rest is paid by their employer, retirement fund, or unemployment fund. There is substantial variation in the premium across funds, and the potential for employers to establish their own provides some incentive for efficiency on the part of fund managers. Some of the variation is due to different benefits: some funds will cover a yearly visit to a health spa, while others will not. Much of the difference in premiums reflects differences in the age and disability levels of the enrollees, and there are some governmental subsidies and cross-fund transfers to reduce the magnitude of premium rate variation. Still, the premium costs for the most expensive funds are double those of the lowest-cost funds. This aspect of the German structure could be said to involve less solidarity than in the Netherlands, where specialized funds do not exist and the funds are paid from a Central Fund. While proposals have been put forward for reform of this aspect of the German system, such proposals have not advanced toward legislation.

The remaining 8% of the population purchases private health insurance from nonprofit and for-profit insurers. Employees who purchase private health insurance receive a contribution from their employer toward these costs that is equal to the employer payment for the sickness fund members. As in the Netherlands, collective contracts can be written. The sickness funds and private insurers participate in a variety of self-regulatory efforts, through regional and national councils. The most significant is the Concerted Action in Health Care, a national forum that attempts to develop macroeconomic health policy and targets that are used to frame the negotiation between insurers and providers. The federal government in Germany is also involved in these forums.

Physicians in Germany can be divided into two major groups: ambulatory care physicians and hospital-based physi-

cians. The ambulatory care physicians in Germany partially fulfill a "gatekeeper" role: they control all referrals to hospitals and to the hospital-based physicians. However, patients are free to choose their ambulatory care physician, who can be a specialist, and they can switch their ambulatory care specialist. Patients can choose their hospital once they have a referral from an ambulatory care physician, but patients usually follow recommendations to go to a particular hospital. Hospital-based specialists are expected to send the patient back to the ambulatory care physician after the episode of illness. The ambulatory care physicians are paid on a fee-for-service basis. For sickness fund patients, the mechanism uses regional expenditure pools that are paid into by the insurers on a capitation basis and are managed by associations of sickness fund physicians. A relative value scale is used to allocate the pool on a fee-for-service basis to the physicians in each region. Private insurance patients directly pay the physician his or her fee and send the bill to the insurer for restitution. Hospital-based physicians are paid a salary by their hospital. In general, the only hospital-based physicians to see patients on an outpatient basis are the clinical directors of each service. At the same time, there are some ambulatory care physicians who have admitting privileges at selected hospitals.

The majority of hospitals in Germany are nonprofit institutions, although there are some small, physician-owned, for-profit institutions. As in the Netherlands, German hospitals are much larger (in terms of the average number of beds in each hospital), and serve larger geographical areas, than US hospitals. This is again a result of more than 40 years of hospital planning, which has focused on developing efficient regional resource allocations.

Hospitals negotiate a set of per-day rates each year with the sickness funds in their area. These rates involve an estimate of the break-even volume for the hospital and an allocation of total hospital costs into fixed and variable costs. The hospital receives a per-day rate that includes fixed and variable costs for all patients until it reaches its break-even point; after that volume is reached, it receives a per-day rate that includes only variable costs. If the total volume of patients was less than the break-even point, then the insurers make an adjustment to the next year's rate so that the hospital receives the total fixed costs.

The German system has not been static: small reforms of the system were implemented in 1976, 1977, 1981, 1982,

1983, 1984, and 1986 that involved adjustments to the hospital and physician payment structures and the manpower and facility planning systems. In 1988 a more extensive reform was made, which expanded copayments for pharmaceuticals, durable medical equipment, and some dental care, in some up to 50%. At the same time, long-term home health care was added to the benefits of the sickness funds, as were more preventive services. There will be increased cross-subsidization between funds to lower the variation in fund premium rates. Last, the utilization review activities of the funds will shift from a PRO (peer review organization)-style approach to one involving more physician education and counseling. However, no systemic reform on the scale of the Dutch efforts is contemplated, and the reunification of Germany has shifted the attention of the medical community to integration of providers in eastern Germany into the overall financing and health care provision structure.

LESSONS FOR THE UNITED STATES

There seems to be a resonance between the values in the health care systems of the Netherlands and Germany and traditional American values. Most American hospital executives would state that patients and their insurers should be obligated to pay for the costs of their treatment. Until the aggressive expansion of HMOs in the 1970s, most physicians expected that all insurers would contract with all physicians and hospitals. Most of the American public would state that physicians and hospitals are obligated to serve all people who need care. Most employers would support an obligation on their employees to pay half of the costs of their health insurance premium, and most employees would support an obligation on their employers to pay at least half of the costs of their health insurance premium. Most large American employers and their employees expect that insurers will cover all of the members of a business, without medical underwriting or exclusions for preexisting conditions. Insurers expect that providers will enter into good faith bargaining and negotiation over fees and charges. Overall, there are many parallels between the values described in the Dutch and German systems and values currently held by the various parties in the American system.

Compared with the often-mentioned Canadian, British, and Swedish systems, the health care systems of the Netherlands and Germany provide American policymakers with models that are closer to our own current struc-

Health Care Costs in the Netherlands, Germany, and the United States*

Indicator	Netherlands	Germany	United States
% GNP for health care			
1975	7.7	7.8	8.4
1987	8.5	8.1	11.1
% Change	9.7	2.9	33.5
Per capita health costs			
1975	\$428	\$409	\$614
1987	\$1038	\$1072	\$2051
% Change	142	162	234
1987 health expenditures, %			
Inpatient care	57	39	47
Ambulatory care	26	29	31
Pharmaceutical	10	22	7
Other health costs	7	10	15
1987 filled inpatient care beds per 1000 population	11.8	11.0	5.3
1987 inpatient care costs per occupied bed	\$50 500	\$38 300	\$182 700
1987 practicing physicians per 1000 population	2.4	2.8	2.3
1987 ambulatory care costs per physician	\$114 500	\$108 900	\$275 300

*Data are from reference 39. GNP indicates gross national product.

ture, if not closer to our traditional values. Under these two systems it is the private sector, not the government, that is responsible for universal insurance. Universal coverage is not achieved through a single governmental agency, but through a variety of non-profit and for-profit insurers. The systems are generally not supported by progressive income taxes, but by income-based premiums. Fees and budgets are not dictated to providers, but arrived at through negotiation between private parties. Determination of health policy is shared by the federal government, the regional authorities, and autonomous interest group associations. Such systems seem closer to American traditions than one involving government-provided insurance.

As seen in the Table,³⁹ these two nations have lower costs than the United States, in terms of both the percentage of gross domestic product and per capita spending. They have also had lower rates of inflation. There is no one single factor that explains these differences, though relatively the United States spends far more on administration than either of these systems. Differences in the operations of the systems are reflected in these statistics. For example, the very high percentage of expenditures on pharmaceuticals in Germany is a consequence of government policy to subsidize biomedical research through higher prices for pharmaceuticals, rather than direct grants, as in the United States with the National Institutes of Health, as well as German clinical preferences for pharmaceutical interventions. The low cost per occupied bed and high number of occupied beds per 1000

population reflect the greater use of hospitals for rehabilitation and long-term care.

These two systems have four lessons that can guide future policy:

1. Explicit public discussion about the underlying values is essential if a consensus is to be reached on the strategy to achieve universal coverage and cost containment.

2. Substantial visible employee contribution, in the form of employee responsibility for 50% of an income-based premium for family coverage, is important to achieve employee cost-awareness and a sense of shared ownership in the financing structure.

3. Mandated employee-employer coverage and mandated insurer offering are both essential to achieve universal coverage through a private sector approach. No workers—be they part-time, seasonal, or temporary—should be excluded from insurance coverage. There must be no gaps or options for coverage: the unemployed must be obligated to continue their insurance.

4. National and regional negotiations between insurers and providers, under government "guidelines," are essential to develop fees and budgets that adequately compensate all providers while ensuring that costs are controlled. All-payer DRG (diagnosis related group) reimbursement systems for hospitals and all-payer expenditure targets or caps for physicians might develop from such negotiations.

One possible configuration for a health system that would reflect values of obligation and responsibility follows:

- Insurers must offer community-rated family-coverage products and

should be prohibited from medical underwriting, exclusion of preexisting conditions, and exclusion of employment categories. Insurers would be free to include whatever economic incentives for efficient utilization (copayments and deductibles) they desired, and selective contracting with providers would be permitted for managed care programs.

- All employed persons must obtain health insurance coverage for themselves and their families.

- Employees and employers would share equally in the premium costs.

- Individuals who are in part-time, seasonal, or temporary work would be required to obtain and continue their coverage, even when unemployed, with the employer share covered by unemployment programs.

- Self-insurance would be possible for large employers. Mechanisms may be necessary to correct for favorable employee age and health status effects, to maintain viable community rating for non-self-insured employers.

- Managed care programs would be allowed under such a structure. However, they must operate with the same restrictions on membership: community-rated family coverage, no medical underwriting or medical exclusions. Their premiums under this approach would represent their true abilities to control utilization and hence costs, not just superior ability at attracting good risks.

- Medicare and Medicaid would be retained, although Medicaid enrollment would shrink, due to increased employer coverage. Both programs could convert to a voucher scheme, giving recipients the option to choose among various managed care programs.

- All-payer global revenue negotiations would occur between hospitals and insurers. The total budgetary needs for each institution would be reviewed by those payers who utilized that institution. Payers would recognize their responsibility to ensure the financial solvency of those institutions with whom they contract, in exchange for institutional recognition of the responsibility for efficient and effective operations. Prospectively determined revenues budgets would retain an incentive for managers to manage their costs.

- In a similar manner, all-payer global revenue negotiations could occur between the medical community and insurers for care provided outside of managed care relationships. This could involve the operation of state volume-performance systems, using a relative value scale and either a prospective or retrospective conversion factor.

- Government regulation would be greater than at present but would shift from a micro-level focus, as in the PRO program, to a more macro-level focus. The regulations would ensure that universal coverage was achieved, that facilities and personnel were highly utilized, and that the system, while privately financed and privately operated, would not impact macro-economic policy. Some regulatory duties could be delegated to private bodies, representative of all parties in the structure.

The achievement of universal coverage in the United States can follow several paths. One route would build on widely held beliefs about mutual private obligations and would develop mechanisms to support the fulfillment of those obligations. While many parties could object to some of the obligations being placed on them, a recognition of the reciprocity of these obligations could lead to significant reform of the American health system in the 1990s. Discussion should focus on efforts to create and maintain a health care system with shared responsibility between the public and private sectors.

My research was supported in part by a World Health Organization Fellowship. Travel support was also received from Arizona State University, Erasmus University Rotterdam, the University of the Army of the Federal Republic of Germany-Munich, and the Robert Bosch Foundation.

The interviews were conducted in four periods: between August 1987 and July 1988, between May and August 1989, in October 1989, and between May and August 1990. I would like to extend heartfelt thanks to my many considerate and helpful sources during my stays in the Netherlands and the Federal Republic of Germany.

References

1. National Leadership Commission on Health Care. *For the Health of a Nation*. Ann Arbor, Mich: Health Administration Press; 1989.
2. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s. *N Engl J Med*. 1989;320:29-37, 94-101.
3. Todd JS. It is time for universal access, not universal insurance. *N Engl J Med*. 1989;321:46-47.
4. Brown ER. Principles for a national health program: a framework for analysis and development. *Milbank Q*. 1988;66:573-617.
5. Davis K. National health insurance: a proposal. *Am Economic Rev*. 1989;79:349-352.
6. Battistella RM. National health insurance reconsidered: dilemmas and opportunities. *Hosp Health Services Administration*. 1989;34:139-156.
7. Kinzer DM. Universal entitlement to health care. *N Engl J Med*. 1990;322:467-470.
8. Tupper CJ. Dreams, dollars, and deeds. *JAMA*. 1990;264:1150-1152.
9. Shortell SM, McNeerney WJ. Criteria and guidelines for reforming the U.S. health care system. *N Engl J Med*. 1990;322:463-467.
10. McCarthy CM. Financing indigent care: short- and long-term strategies. *JAMA*. 1988;259:75.
11. Ginzberg E. Medical care for the poor. *JAMA*. 1988;259:3309-3311.
12. Davis JE. National initiatives for care of the medically needy. *JAMA*. 1988;259:3171-3173.
13. Tallon JR Jr. A health policy agenda proposal for including the poor. *JAMA*. 1989;261:1044.
14. Thorpe KE, Siegel JE, Dailey T. Including the

poor: the fiscal impacts of Medicaid expansion. *JAMA*. 1989;261:1003-1007.

15. Thorpe KE, Siegel JE. Covering the uninsured. *JAMA*. 1989;262:2114-2118.

16. Regula R. National policy and the medically uninsured. *Inquiry*. 1987;24:48-56.

17. Himmelstein DU, Woolhandler S, and the Writing Committee of the Working Group on Program Design. A national health program for the United States. *N Engl J Med*. 1989;320:102-108.

18. Woolhandler S, Himmelstein DU. A national health program: northern light at the end of the tunnel. *JAMA*. 1989;262:2136-2137.

19. Reiman AS. Universal health insurance: its time has come. *N Engl J Med*. 1989;321:117-120.

20. Cyphert ST, Rohrer JE. A national medical care program: review and synthesis of past proposals. *J Public Health Policy*. 1988;9:456-472.

21. Caper P. Solving the medical care dilemma. *N Engl J Med*. 1988;318:1535-1536.

22. Dickman RL, Ford AB, Liebman J, Milligan S, Schorr AL. An end to patchwork reform of health care. *N Engl J Med*. 1987;317:1086-1089.

23. Kirkman-Liff BL, Lapre R, Kirkman-Liff TL. The metamorphosis of health planning in the Netherlands and the USA. *Int J Health Planning Management*. 1988;3:89-109.

24. Eichhorn S. Health services in the Federal Republic of Germany. In: Raffel MW, ed. *Comparative Health Systems: Descriptive Analysis of Fourteen National Health Systems*. University Park: Pennsylvania State University Press; 1984:286-334.

25. Tiddens HA, Heesters J, van de Zande J. Health services in the Netherlands. In: Raffel MW, ed. *Comparative Health Systems: Descriptive Analysis of Fourteen National Health Systems*. University Park: Pennsylvania State University Press; 1984:371-418.

26. Light DW, Schuller A, eds. *Political Values and Health Care: The German Experience*. Cambridge, Mass: MIT Press; 1986.

27. Van de Ven WPM. The key role of health insurance in a cost-effective health care system: towards regulated competition in the Dutch medical market. *Health Policy*. 1987;11:253-272.

28. Rutten FFH. Market strategies for publicly financed health care systems. *Health Policy*. 1987;7:135-148.

29. Lapre RM. A change of direction in the Dutch health care system? *Health Policy*. 1988;12:21-32.

30. *Changing Health Care in the Netherlands*. Rijswijk, the Netherlands: Ministry of Welfare, Health, and Cultural Affairs; 1988.

31. Stone D. Professionalism and accountability: controlling health services in the United States and West Germany. *J Health Polit Policy Law*. 1987;12:32-47.

32. Altenstetter C. An end to a consensus on health care in the Federal Republic of Germany? *J Health Polit Policy Law*. 1987;12:505-536.

33. Kirkman-Liff BL. Physician payment methods and cost-containment strategies in the Federal Republic of Germany: a source of ideas for Medicare reform. *J Health Polit Policy Law*. 1990;15:69-99.

34. Kirkman-Liff BL. Physician payment methods and cost-containment strategies in the Netherlands. *Inquiry*. 1989;26:468-482.

35. Kirkman-Liff BL, Lapre R, Kirkman-Liff TL. The metamorphosis of health planning in the Netherlands and the USA. *Int J Health Planning Management*. 1988;3:89-109.

36. Kirkman-Liff BL, van de Ven WPM. Improving efficiency in the Dutch health care system: current innovations and future options. *Health Policy*. 1989;13:35-53.

37. Lapre RM. A change of direction in the Dutch health care system? *Health Policy*. 1988;10:21-32.

38. Van de Ven WPM. The key role of health insurance in a cost-effective health care system: towards regulated competition in the Dutch medical market. *Health Policy*. 1987;7:253-272.

39. Health care expenditure and other data. *Health Care Financing Rev*. 1989 Annual Supplement:111-194.

Health Access America—Strengthening the US Health Care System

James S. Todd, MD; Steven V. Seekins, MPA; John A. Krichbaum, JD; Lynn K. Harvey, PhD

Although Americans remain generally satisfied with the health care provided to them, sufficient access to high-quality, affordable health care for citizens without health care insurance has become an increasing problem in the last decade. Using the policy development process of the American Medical Association, Health Access America was conceived by the Association to improve access to affordable, high-quality health care. The proposal consists of six fundamental principles and 16 key points. This article specifically focuses on the five points that, if enacted into law, would improve access to health care for Americans who are, for various reasons, without health insurance.

(*JAMA*. 1991;265:2503-2506)

FOR SEVERAL decades, American medicine has led the world in scientific and technological advance. We have become the premier nation in providing high-quality, comprehensive medical care and education. The vast majority of Americans are satisfied with their physicians and the health care services they receive.^{1,2} Most patients have the ability to freely choose their physician, hospital, and system of care. Medical professionals remain free to act as patient advocates rather than agents of the government or other interests.

However, these many pluses have not provided answers to serious questions that leave millions of Americans without health insurance coverage. Despite most recent annual national spending of over \$600 billion and 11% of the gross national product on health care, more than 30 million Americans do not have affordable medical insurance for themselves and their families, which reduces their access to care. Many public opinion polls find citizens discon-

tented with this inequity despite the very high level of satisfaction with the quality of medical care practiced in the United States.^{1,3}

Even with these and other problems with our health care system, approximately 87% of Americans have private or public medical insurance.⁴ Of the approximately 33 million uninsured in this country, roughly 26 million are working Americans and their families (not including part-time workers).⁵ Approximately 3 million persons, some of whom are employed, are considered "medically uninsurable" by private insurance companies due to preexisting health conditions.⁶

Originally designed to serve citizens who fell below the federal poverty level, the Medicaid program is severely underfunded and has categorical eligibility requirements that are too strict. The program covered only about 13.2 million of the 32.5 million Americans living in poverty in 1987.⁷ Some of these individuals also were employed.

Although there is the need for reform of the US health care system, reform must be managed carefully. The private health care industry in this country em-

ploy 7.7 million workers, 6.8 million of whom are nonsupervisory personnel.⁸ The health care industry employs 8.1% of the private labor force in the United States.⁷ The economic impact of the provision of health care has added to the overall growth of the economy.

The American Medical Association (AMA) has a long history of concern and action directed toward solving problems of the health care sector. Costs, access to health care, and quality of care have been recurring subjects of health policy for a long time. In responding to these concerns, the AMA has often assumed a leadership role, offering its own approaches as well as working with other organizations to build a consensus on appropriate solutions.

In 1964 and again in 1977, independent Commissions on the Cost of Medical Care were established by the AMA to study the causes of rising health care costs. The commission reports resulted in a range of recommendations from which AMA policy concerning health cost problems in the 1960s and 1970s was developed.⁹

In 1982, the AMA and 172 other organizations initiated the Health Policy Agenda (HPA) for the American People in response to recognition of the growing complexity of problems confronting the health care system. Four hundred twenty-five representatives of these different health, health-related, business, labor, government, and consumer groups met over 5 years to develop the Agenda. Over 150 principles were developed, on which more specific HPA policy proposals were based.¹⁰

Many other AMA initiatives in the development of practice parameters,

From the American Medical Association, Chicago, Ill.
Reprint requests to American Medical Association,
515 N State St, Chicago, IL 60610 (Dr Todd).

professional liability reform, and Medicaid and Medicare reform led to the decision to develop a proposal for comprehensive reform of the health care system.

HEALTH ACCESS AMERICA

The AMA's member physicians believe significant improvements in our system need to be made to improve access, to ensure continued high quality, and to moderate cost increases. To accomplish these system improvements, the Association has developed and announced publicly a proposal called Health Access America.¹¹ In developing the specific provisions of this proposal, the Association took into consideration what it believes are a number of fundamental principles that should underscore the national discussion on improving the health care system in this country. These fundamental principles are as follows:

- Improvements to the American health care system should preserve the strengths of our current system.
- Affordable coverage for appropriate health care should be available to all Americans, regardless of income.
- Particular efforts are needed to assure continued access by the elderly to affordable health care services.
- Health care services should be delivered with high quality at appropriate costs.
- Patients should be free to determine from whom and the manner in which health care benefits are delivered.
- All physicians should be committed to the highest ethical standards in the delivery of care to patients.

With these fundamental principles in mind, the Association developed 16 specific points that are designed to accomplish the specific goal of expanding access to affordable, quality health care to all Americans. Although all of the 16 points in Health Access America have significance in the reform of the system, we will explore specifically the five major points relevant to encouraging access to health care insurance for those who do not currently have it. These include enacting major Medicaid reform, requiring employer provision of health insurance, creating state-level risk pools, enacting Medicare reform, and expanding coverage for long-term care.

MEDICAID REFORM

The AMA proposal for Medicaid reform would set new national requirements to ensure that no poor person is left without access to needed health care. In all states, persons below poverty

income levels would be eligible for and receive a uniform set of adequate benefits. The AMA believes strongly that federal and state governments must ensure access to and funding for medical care for all persons with incomes below the poverty level.

The federal poverty level should be adjusted by a state cost-of-living modifier to ensure that Medicaid eligibility truly reflects the economic realities in the various states. Income status should be the only eligibility criterion; other existing categorical requirements should be repealed. At the same time, using one national formula by which eligibility will be determined in the various states will eliminate state discretion in setting the economic level of eligibility. This will avoid perpetuating the widespread inequities existing across state boundaries in the Medicaid program today.

Medicaid benefits need to ensure provision of all medically necessary physician and hospital services—and should not differ across state lines. Because of the impoverished status of Medicaid beneficiaries, added coverage for prescription drugs, rehabilitative services, and emergency services must be provided. Because unrealistically low provider reimbursement levels reduce access, Medicaid reimbursement levels should be increased to the Medicare level.

Because of the substantial costs of Medicaid expansion, some phased-in approach probably will be necessary. One possible approach outlined in the Health Access America proposal would begin expanding Medicaid by requiring a phased-in coverage for pregnant women and children. The AMA's initiative was instrumental in accomplishing this initial expansion through the Omnibus Budget Reconciliation Act of 1990. Additional steps in the Medicaid expansion might include phasing in a requirement that Medicaid eligibility shall equal 100% of the poverty level (state adjusted) and creating a basic national level of Medicaid benefits that must be covered. The basic benefits should include necessary inpatient and outpatient hospital and emergency services; rural health clinic and other laboratory and x-ray services; home health services; early and periodic screening, diagnosis, and treatment for individuals under 21 years of age; family planning; physician services; prescription drugs; and rehabilitative services.

REQUIRED EMPLOYER INSURANCE

Health Access America requires employer provision of health insurance for all full-time employees and their fam-

ilies, with tax help to employers. About 26 million of the approximately 33 million uninsured are employed individuals and their families (not including part-time workers).⁵ Tax incentives must be provided and risk pools created so that new and small businesses can afford the cost of such coverage. Initially, only larger businesses should be subject to this requirement.

To make the transition manageable for all businesses, the program should be phased in over several years. Additional elements in a legislative program to bring about required employer coverage include:

- Preempt state-mandated benefit laws for employer health benefit plans to help small businesses afford a basic program. Such plans would be required to meet minimum standards of coverage, including basic hospital, physician, diagnostic, prenatal, and well-baby care, with reasonable annual limits on employees' incurred expenses for premiums, coinsurance, and deductibles. The AMA has recently put forth such a minimum benefits proposal for the required employer insurance.¹²
- Amend the Internal Revenue Code or Employee Retirement Income Security Act (ERISA) to allow states to require self-insured employers to participate in private, not-for-profit uninsured and uninsurable risk pools established pursuant to state law.
- Establish a federal incentive program for states to enact legislation to set up private, not-for-profit health benefit pools (including the uninsurable, the uninsured, and small businesses).
- Require such pools to offer to small businesses (<25 employees) access to a basic benefits policy at group rates.
- Make permanent the temporary 25% income-tax deduction for premiums for health benefits plans for the self-employed. Expand the deduction to 100% of the premium payment for the self-employed and others who must pay 100% of a health benefit premium.
- Expand continuation coverage established in the Consolidated Omnibus Budget Reconciliation Act, 1985 (COBRA), to require employers to pay the same share of an employee health benefit premium that was paid by the employer, prior to termination, for up to 4 months after the qualifying event.
- Require employers to offer an enrollment period for employees who lose coverage because a spouse or other family member lost coverage due to change of employment.
- Eliminate provisions that exclude preexisting conditions from employer health benefit plans.

STATE-LEVEL RISK POOLS

Health Access America will create state-level risk pools in all states. Risk pools would extend coverage to two groups: (1) the medically uninsurable, for whom access to coverage is not available, and (2) others for whom individual health insurance policies are too expensive and group coverage is not available.

A state risk pool is a legislatively created insurance program. Since premiums generally do not cover all the costs of operating such a pool, states that currently have risk pools fund them through a variety of mechanisms. One common approach is to assess insurance carriers in the state, sometimes subsidizing the assessment through some sort of tax credit. At least one state pays for risk pool losses out of general tax revenues, while another has placed a tax on hospital patient revenues.

As part of the Health Access America proposal, risk pools help ensure that no American would be unable to obtain affordable health insurance because of a health condition. Small employers should have access to such risk pools so that they could acquire coverage for their employees at affordable rates if it was unavailable for a better price in the private market. Rates should be set at standard group rates. Premium assistance from the state would be provided for those persons who are not covered through employment and who are between 100% and 150% of the poverty level.

Elements of a phased-in legislative approach that can accomplish extension to the medically uninsurable and for those otherwise unable to obtain coverage include:

- Requiring, as a condition of federal tax deduction, that all payers for employee health benefits (payment of premium, or direct payment for services by a self-insured plan) must participate in a private not-for-profit risk pool established pursuant to state law. The pool would provide subsidized coverage for those who have been denied coverage or have lost coverage because of a medical condition and underwriting rules.

- Allowing a 100% tax deduction of premium payment for individuals who purchase insurance coverage through the pool.

MEDICARE REFORM

To ensure continued access by senior citizens to affordable health care services, two major actions are needed.

First, we must enact Medicare reform to avoid financial bankruptcy of the program by creating an actuarially sound, prefunded program to ensure se-

nior citizens continued access to quality health care. Today, four workers' tax contributions support a single Medicare beneficiary. As our population continues to age, there will be only two workers paying taxes to support each beneficiary by the middle of the next century. A shrinking worker base means substantially higher premiums in the years to come. Without further support, the system will collapse.

This reform would include a new approach to catastrophic benefits. The program would be funded through individual and employer tax contributions during working years. There would be no program tax on senior citizens, and all persons reaching the age of eligibility would be entitled to a voucher for purchase in the private sector of a comprehensive health insurance policy meeting federal standards. Senior citizens would retain freedom to choose their system of provision of care (eg, fee-for-service, health maintenance organization, preferred provider organization). The creation of an enhanced Medicare trust fund beyond immediate payout needs (prefunding) would create investment income and thus end up costing taxpayers much less than continuation of the current system.

The reform elements noted above were introduced in the last Congress as HR 2600 by Rep Charles Rose (D, NC).

EXPANSION OF LONG-TERM CARE FOR SENIOR CITIZENS

Health Access America proposes to expand long-term care financing through increasing private sector coverage, encouraged by tax incentives and an asset protection program, and to provide Medicaid coverage for those below the federal poverty level. The "asset protection" approach, in essence, means that individuals who purchase long-term-care insurance would be able to protect designated assets up to the dollar value of the insurance benefits from being included in any eligibility determination for Medicaid coverage for long-term care.

This kind of program was introduced in the last Congress by Rep Barbara Kennelly (D, Conn). Sliding scale subsidies should be provided for the purchase of long-term-care insurance for individuals with incomes between 100% and 200% of the poverty level. Employer-provided long-term-care insurance should be treated in the same tax fashion as health insurance coverage. A tax deduction or credit should be created to encourage family care giving.

A phased-in legislative approach to accomplish the above elements would call for the following:

- Amending the Internal Revenue Code to allow businesses and individuals to treat payment for long-term-care insurance in the same manner as health benefit plans are now treated.

- Allowing individuals to deduct for income tax purposes 100% of the cost of long-term-care insurance premiums without meeting the 7% floor for health costs or the 2% floor for miscellaneous deductions.

- Amending the tax code to allow for penalty-free and tax-free withdrawals from individual retirement accounts for the purchase of long-term-care insurance policies.

- Amending Medicaid to allow for an asset protection program so that resource eligibility requirements are adjusted to allow an individual to retain assets up to the amount that private sector insurance pays on his or her behalf for long-term care.

CONCLUSIONS

Many individuals and organizations are suggesting differing reforms for the US health care system, and some of the proposals advocate radical change. America's physicians, represented through the AMA, believe it is better to build on a system that is currently serving effectively the vast majority of the nation's population, 87% of whom are insured.

In a time when budget deficits are running at record highs, when economic recession threatens our economic well-being, and when nearly every other democratic nation is having health care system problems, it would seem prudent to approach reform in a carefully managed, incremental manner. This proposal has been developed based on the policy of the AMA. It is comprehensive and has been undertaken over a long period of time with careful attention to detail. The AMA will be developing refinements and modifications as needed. We welcome input and suggestions.

The AMA has had preliminary actuarial studies performed, which do not take into account potential offset savings from various elements of the proposal. These studies indicate that, after full implementation, the proposal would cost the federal government about \$21 billion per year in 1990 dollars (a figure close to the new federal health care spending of \$24 billion projected under the Pepper Commission proposal).

Estimates of the aggregate net new costs to state governments, employers, and individuals are much more difficult to project because of the offsets involved. Costs would not necessarily be higher for all of these sectors. For ex-

ample, there would be a reduction of cost-shifting expenses for employers who now provide insurance. States would pay more for Medicaid, but a significant portion of such costs would be offset by savings in their current expenditures for the uninsured. Many individuals and families would obtain insurance coverage for expenses that are now paid out of pocket. Others would pay premiums they do not now pay. Employers who do not now provide coverage would have additional costs, but with a percentage of payroll cap on such costs and with tax assistance from the federal government. Until policymakers decide on the precise nature of the reforms they are willing to make and the phasing in they want to undertake, exact estimates, particularly of the net costs of the proposal, are not feasible.

It should come as no surprise that providing insurance coverage to over 30 million additional people will be costly. We suggest that we all accept this idea and get on with the discussion on the type of reform that would best meet the nation's needs. Once the precise nature of the reform is decided, these costs can be accurately estimated and sources of funding committed. The costs will need

to be borne by a combination of government, business, and individuals and can come from taxes, reductions in lower-priority spending, or discontinuance of certain programs. We have no doubt that what is required is a national "will" rather than a national "won't."

Perhaps the most important challenge facing us as a nation is to place reform of the health care system on the national agenda. It is not there now. America's physicians are committed to providing high-quality, affordable care and want to work with government and other decision makers toward positive solutions that ensure adequate health insurance coverage for all Americans. We invite all interested parties to bring their proposals to the table and to join in moving an action agenda forward. The time for reform is now!

References

1. Taylor H. What Americans (and other countries) think of their health care system. Presented before the Pharmaceutical Manufacturers Association Public Affairs Meeting; October 30, 1989; Naples, Fla. Based on data collected by Louis Harris & Associates.
2. *Health Care in the United States*. Los Angeles (Calif) Times poll; March 20, 1990.
3. Blendon RJ, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in ten nations. *Health Aff*. 1990;9:185-192.
4. Nelson C, Short K. *Health Insurance Coverage 1986-88: Survey of Income and Program Participation*. Washington, DC: US Dept of Commerce, Bureau of the Census; 1990. Current Population Reports: Household Economic Studies, series P-70, No. 17.
5. Employee Benefit Research Institute Issue Brief 104. Washington, DC: Employee Benefit Research Institute; July 1990. Utilizes data from the March 1989 Current Population Survey conducted by the Bureau of the Census.
6. American Medical Association staff estimate, utilizing most recent HIV/AIDS estimates and information from *Health Insurance: Risk Pools for the Medically Uninsurable*. Washington, DC: US General Accounting Office; April 1988:5.
7. Bureau of the Census. *Statistical Abstract of the United States*. 110th ed. Washington, DC: US Dept of Commerce; 1990.
8. Donham CS, Maple BT, Singer N. Health care indicators. *Health Care Financ Rev*. 1990;11: 169-196.
9. *Report of the National Commission on the Cost of Medical Care*. Chicago, Ill: American Medical Association; June 1978. AMA Board of Trustees report A (Annual Meeting, 1978).
10. *The Health Policy Agenda for the American People*. Chicago, Ill: American Medical Association; 1987.
11. *Health Access America: The AMA Proposal to Improve Access to Affordable, Quality Health Care*. Chicago, Ill: American Medical Association; 1990.
12. *A Minimum Benefits Package*. Chicago, Ill: American Medical Association; 1990.

A Call for Action

The Pepper Commission's Blueprint for Health Care Reform

Sen John D. Rockefeller IV

After a year of deliberation and investigation, the Pepper Commission recommended action to ensure that all Americans would have health insurance protection in an efficient, effective health care system. Because it believes that action is urgent, the commission would build universal coverage by securing, improving, and extending the combination of job-based and public coverage we now have. Reform would entail the following elements: a combination of incentives and requirements that would guarantee all workers (with their nonworking dependents) insurance coverage through their jobs; replacement of Medicaid with a new federal program that would cover all those not covered through the workplace and workers whose employers find public coverage more affordable; guaranteed affordable coverage for employers—through reform of private insurance, tax credits for small employers, and the opportunity to purchase public coverage; a minimum benefit standard for private and public plans that would cover preventive and primary services as well as catastrophic care and would include cost sharing, subject to ability to pay; and a combination of public and private sector initiatives to promote quality and contain costs.

(*JAMA*. 1991;265:2507-2510)

THE 1990s is not the first time Americans have questioned the adequacy of their medical care system. Millions of Americans have long lacked the basic insurance protection needed to assure access to care, and health care costs have risen rapidly and almost inexorably for more than two decades. Today, however, the call for health care reform seems to have reached new heights.¹ This new urgency may reflect the fact that not only are a large and growing minority of Americans—well over 30 million people—without health insurance protection, but the majority now also see the system they count on in jeopardy.

Most Americans get insurance protection through the workplace. However, job-based coverage has become insecure, even for those who are currently well insured.^{2,3} The reasons for insecurity differ for workers in small and large businesses. In small businesses, the

threat to coverage comes from what can legitimately be described as the disintegration of the small group insurance market. As employers faced with high costs shop for low premiums, insurers increasingly compete to insure the young and healthy and avoid workers who have experienced illness or who, for a variety of reasons, are seen as especially likely to use medical care. Whole groups may be denied coverage, have coverage terminated, or have rates substantially increased, based on the perceived risk their members pose. Alternatively, individuals within groups may be excluded from the group's policy, in total or for pre-existing conditions. These practices mean that competition among insurers in the small group market now focuses on ways to avoid risks rather than on ways to share them. As a result, workers who were once well insured face the possibility that coverage will become unavailable when they need it the most.

In large businesses, the threat to coverage comes not from insurance practices but from ever-increasing health

care costs. In 1987, employers' health care spending was equivalent to 94% of after-tax profits, up from about 14% in 1965 and 74% in 1984.⁴ Faced with these cost pressures, employers have, not surprisingly, tried to reduce the benefits they provide. Organized labor has resisted such reductions, as evidenced by the dominance of health care as an issue in many recent strikes. In many cases, coverage has been preserved. However, declines in coverage for workers' dependents in recent years reflect, in part, the increased contributions to premiums employers have required from their employees.²

Finally, for small and large businesses alike along with individuals and all levels of government, ever-increasing health care costs have raised questions about value for the dollar in health care spending. It has become almost commonplace to observe that the United States far exceeds other nations in per capita health care spending, while it lags behind even many relatively poor countries in its mortality statistics, especially for infants. High health care costs in the United States may reflect superior quality of treatment that is not captured in gross mortality statistics, and these statistics reflect many factors other than medical care. Nevertheless, as US health care expenditures continue to rise, Americans increasingly ask whether we are using our money wisely.²

In September 1990, the US Bipartisan Commission on Comprehensive Health Care—the Pepper Commission—issued a call for action to address this growing crisis: to implement system wide health care reform that would guarantee all Americans health care coverage in an efficient, effective health care system. This bipartisan commission, created by (and not repealed with) the Medicare Catastrophic Coverage Act of 1988, included 12 members of

Senator Rockefeller (D, WV) is the Chairman of the Pepper Commission.

Reprint requests to 109 Hart, Senate Office Building, US Senate, Washington, DC 20510 (Sen Rockefeller).

Congress (six from the House and six from the Senate) and three presidential appointees. Its charge was not simply to study the problems facing the health care system but also, and most important, to develop recommendations for workable and enactable legislation that could resolve these problems. To fulfill this charge, the commission heard testimony from numerous witnesses in public hearings in the nation's capital and around the country, received a series of expert briefings, and engaged in intensive deliberations to consider all points of view, clarify objectives, and develop recommendations to achieve them.

Agreement on those recommendations required commission members to make hard choices and to compromise strongly held positions. Members who believed action was critical refused to allow their personal vision of the best to become the enemy of the good.

In this article I will summarize the commission majority's conception of that "good"—a blueprint for universal coverage that we believe is enactable and that, in our continuing roles as members of Congress, we are committed to enact. (The commission's recommendations for reform, in long-term care as well as health care, are fully developed in its final report to the Congress.² They have also been summarized and discussed in the *New England Journal of Medicine*.³)

BLUEPRINT FOR REFORM

The commission's blueprint for reform rests on four fundamental conclusions from its year-long investigations and deliberations.

1. Health insurance coverage must be universal. Only if everyone is adequately covered can we assure all Americans access to care when they need it and bring an end to "cost shifting" and underservice to the uninsured.

2. Simply patching the current system—for example, with Medicaid expansions—cannot achieve universal coverage. Even if government were to cover all the poor (rather than the current 40%) and subsidize private coverage for the near-poor, insurance coverage would remain too expensive for about half the currently uninsured. In addition, such an approach would have taxpayers bear the costs of low-income workers whom their employers (unlike most employers) fail to protect.

3. Replacing the current system with government-run national health insurance is simply not practical. Shifting so many people and so many dollars from the private sector to the public sector is too disruptive to be politically feasible in the near future.

4. Expanding access and controlling costs must proceed hand in hand. To pursue one goal without the other is to further undermine a system already under serious stress.

In essence, the commission concluded that, to achieve universal health care coverage in the immediate future—as it believed essential—we can neither patch nor replace current coverage. Rather, we must secure and extend the combination of job-based and public coverage we now have into a system that truly guarantees adequate coverage for all Americans and that ensures effective and efficient operation in private and public coverage alike.

The following summarizes the commission recommendations that lay out the specific elements needed to build this job-based/public system of universal coverage.

Ensuring Job-Based Coverage

To make job-based coverage universal, all workers must be entitled to health care coverage in their jobs, just as they are entitled to a decent minimum wage or participation in social security. Three fourths of American workers now obtain coverage for themselves and their families through the workplace. Three fourths of the uninsured are workers or are in workers' families. If all employers covered their workers, as the majority do now, substantial gains in coverage would result.

Because of the different circumstances facing small and large businesses, achieving job-based coverage for all workers and their families requires that they be treated differently. Almost all businesses with more than 100 employees now provide adequate coverage for most of their employees. Consequently, with a brief period for adjustment, the commission would require all such businesses to provide coverage to all their workers and nonworking dependents.

In contrast, small businesses currently face significant barriers to purchasing insurance coverage. Although the majority of even the smallest businesses provide coverage, employers with fewer than 25 workers employ about half the working uninsured; employers with fewer than 100 workers employ about two thirds. Rather than require such employers to cover their workers, the commission recommends special measures to alleviate the barriers to voluntary purchase of insurance that these employers now face.

Specifically, the commission recommends reforms in the private insurance market that would guarantee the availability of a specified minimum benefit package (overriding state-mandated

benefits) to all small businesses and their employees—without the discrimination they now face based on insurers' perceptions of industry "risk" or workers' pre-existing conditions. To ease the burden of health insurance costs, the commission also recommends two kinds of tax credits for small employers: (1) allowing unincorporated businesses and the self-employed, like incorporated businesses, to deduct from taxable income the entire cost of their health insurance premiums and, (2) for a 5-year period, providing a 40% subsidy against premium costs for employers with fewer than 25 workers and an average payroll of less than \$18 000 per worker.

The combination of insurance reform and subsidies should provide small employers with the opportunity many now lack to purchase insurance for their workers. However, if after 4 to 5 years small businesses have not availed themselves of that opportunity (that is, if they have not covered at least 80% of workers and dependents who now lack coverage from their employers), the commission recommends that small businesses, like larger ones, be required to purchase coverage.

Providing Affordable Coverage

Just as it is businesses' job to provide coverage, the commission believes it is government's job to guarantee that affordable coverage is available. Rather than simply requiring businesses to buy private coverage, whatever it costs, the commission would therefore give employers a choice: purchase private coverage or purchase coverage from a newly established federal program. That program could be administered in conjunction with or as part of the Medicare program. Like Medicare, it could be administered through private insurers or by states, subject to federal rules. The "price" for public coverage would be set as a specified percentage of the payroll, putting a cap on employers' obligations and avoiding excessive costs for covering part-time workers. The percentage would be set to encourage employers who now purchase private insurance to retain that coverage and to establish a fair balance of additional coverage responsibilities between private insurers and the public program.

Establishing Federal Coverage

Even if job-based coverage reaches all workers, it cannot achieve universal coverage by itself. The commission would therefore require that government do its share by assuring coverage for those not covered through employment in a program that pays appropriately for services and guarantees access

to care. Medicaid—with its current eligibility, payment, and benefit limitations—falls far short of this objective.

To guarantee coverage to all, the commission therefore recommends replacing Medicaid with a new federal program for nonworkers and the self-employed—the same federal program to be available for workers whose employers find it more affordable. (Because Medicaid now covers services not included in the minimum benefits described below, that program would not be completely eliminated. It would continue in its current form for benefits not included in the new federal program.) The federal program would pay providers rates determined according to Medicare rules, replacing the sometimes arbitrary Medicaid payment limitations with rates more likely to ensure access to care. Furthermore, the federal program would provide the same minimum benefits that employers must provide. The requirements would ensure national standards for eligibility, benefits, and payment that, in contrast to Medicaid, would guarantee all Americans, no matter what their income, employment status, or place of residence, access to affordable insurance protection.

Defining a Minimum Benefit

To assure access to care, private and public insurance plans must provide an adequate minimum standard of coverage. The commission recommends an adequate minimum standard that is similar to but less generous than coverage most employers now offer; that guarantees the uninsured, most of whom have low incomes, access to primary as well as catastrophic care; that includes cost sharing (subject to ability to pay) to keep consumers conscious of costs; and that emphasizes preventive services.

Although employers could offer more generous benefits, as most do now, the commission recommends that coverage in private plans and the public program include hospital care, surgical and other inpatient physician services, physician office visits, diagnostic tests, and limited mental health benefits (45 inpatient days and 25 outpatient visits). In addition, benefits would include preventive services—prenatal care, well-child care (including immunization), mammograms, Papanicolaou smears, colorectal and prostate screening procedures, and other preventive services that evidence shows are effective relative to costs. This emphasis on preventive services reflects the commission's view that early diagnosis and treatment may result in reduced mortality rates and increased quality of life and may produce savings

by averting the costs of expensive treatment.

To promote sensitivity to costs, individuals would contribute to the costs of coverage, subject to limits on out-of-pocket spending and ability to pay. Specifically, individuals covered through employment would pay a maximum of 20% of premium costs for private coverage or a contribution to the public plan equivalent to 20% of the combined employer-employee contribution, paid as a percentage of wages. Individuals not covered through employment would pay the full cost of public coverage, subject to ability to pay.

For all except preventive services, deductibles (\$250 per individual and \$500 per family) and coinsurance (20% for basic services and 50% for outpatient mental health services) would apply. No individual or family, however, would pay more than \$3000 in cost sharing for covered services.

So that cost sharing does not become a barrier to insurance coverage or service use, premiums and cost sharing would be subsidized for low-income people. People with incomes below 100% of the federal poverty standard would pay no premiums or coinsurance, and subsidies would be available on a sliding scale for people with incomes up to at least twice the poverty standard. For this population, contributions to premiums could not exceed 3% of income. Subsidies would apply to both private and public coverage.

Promoting Quality and Containing Costs

Universal coverage can only be as sound as the health care system itself. Coverage that buys unnecessary or inappropriate care, pays for poor quality, fails to promote efficient delivery, or shifts costs from some purchasers to others wastes private and public expenditures that could be used elsewhere.

Just as its coverage recommendations would share responsibility between employers and government, the commission recommends private and public initiatives to promote value for the dollar in the use of health care. On the private side, the commission's recommendations for insurance reform that would prohibit competition based on a quest for good risks would promote competition among insurers to manage care efficiently. Furthermore, commission recommendations would not only encourage employers to pursue the development of managed care in job-based coverage, but they would also require that insurers who offer managed care to large businesses extend it to small businesses they cover.

On the public side, increasingly sophisticated Medicare rules for paying physicians and hospitals would be extended to the new federal program. These mechanisms—prospective payment for hospitals and the resource-based relative value scale for physicians—aim to ensure efficiency and cost control in the public program and would serve as a model for payment in the private sector.

Other commission recommendations would assure value for the dollar in the use of medical services in both the private and public sectors. The minimum benefit standard establishes cost-sharing requirements so that individuals (subject to ability to pay) would take costs as well as benefits into account as they use medical care. Equally important, the commission recommends federal action to help consumers and insurers become prudent purchasers of medical care. The commission would have the federal government undertake the data collection, outcomes research, and development of practice guidelines and quality assurance mechanisms that are critical to helping public and private purchasers use their money wisely. Initiatives already under way in the recently created Agency for Health Care Policy and Research provide the foundation for these efforts.

Finally, the commission recognizes that more action may be called for to assure appropriate spending. Most critical in this regard is finding a better way to deal with the problem of medical malpractice. Malpractice litigation, as currently handled, fails to protect patients and burdens the health care system with high premiums and the costs of defensive medicine. Because at present there is no consensus on the best way to remedy these problems, the commission calls on the Physician Payment Review Commission and congressional committees to study the problem, conduct demonstrations, and make recommendations for appropriate federal action. Furthermore, the commission calls on both the Physician Payment Review Commission and the Prospective Payment Assessment Commission—responsible for oversight of Medicare physician and hospital payments, respectively—to assess cost experience and initiatives to contain costs in the private and public sectors, and to make periodic recommendations to the Congress on the need for federal initiatives.

Implementing Step by Step

Action cannot come too soon for the millions without coverage and millions more who see their coverage threatened. However, an effective system

cannot be put into place overnight. The commission therefore recommends that its recommendations be implemented one step at a time over a 5-year period. The first step in expanding coverage is to ensure protection for pregnant women and young children who are now uninsured, through access to the new federal public program, and to initiate insurance reforms to reverse the disintegration of the private insurance market for small employers. These actions would address the most urgent gaps in coverage and would create an environment in which employers will have an opportunity to provide the coverage the commission expects.

The second step, to take place in years 2 through 5 of implementation, is to put in place the incentives and requirements for job-based coverage, giving employers time to adjust to their new obligations. The final step, to occur in year 5, is to extend the federal program to all nonworkers.

At this point—with all public and private coverage mechanisms fully in place—all individuals would be required to obtain coverage through their employers or the new federal program.

COSTS AND FINANCING

Achieving universal coverage will require an increase in the nation's health care expenditures. However, because we already provide and pay for considerable (albeit insufficient) care to the uninsured, the increase is relatively small. Furthermore, because this proposal for universal coverage is designed to share costs fairly among individuals, employers, and government, the burdens many now face—through cost shifting, uncompensated care, and excessive out-of-pocket payments—would be dramatically reduced.

The commission's recommendations would buy health coverage for all Americans for less than 2% more than health care expenditures under the current system. If implemented in 1990, that would mean only a \$12 billion increase in the nation's health care bill—from \$647 billion to \$659 billion. Of this overall increase, just over half would go to hospitals and about one fourth to physicians. The remainder would go to other professionals and services.

Not all sectors of society would have to pay more. Employers who now offer health insurance to workers and dependents would save an estimated \$13 billion per year, because they would no longer pay the costs of covering (as dependents) individuals who work for other firms and of uncompensated care. Individuals and families would save an estimated \$19 billion, as employers and

government would share in their insurance premiums and health care costs. State and local governments would save an estimated \$7 billion in payments they now make, beyond Medicaid, to finance care to the uninsured. Because state contributions to the new federal program would be limited in real terms to the level of current Medicaid contributions, states would be relieved of the growing burden of that program.

Employers who do not now provide health insurance for their workers and the federal government would share the cost of new expenditures. Newly insuring employers would face a total new cost of about \$28 billion—an average of less than 4% of payroll after taxes. For a single employer the increase could not exceed the percentage of payroll specified as the "price" of coverage in the new federal program (estimated at 7% of payroll, based on currently available data).

Finally, new federal expenditures under the recommendations are estimated at \$24 billion—to cover nonworkers, to subsidize insurance costs for individuals and employers, and to pay providers at rates set according to Medicare rules.

New federal expenditures require new federal revenues. Consistent with its charge and its commitment that all individuals, regardless of age or illness, have adequate protection for health and long-term care services, the commission recommends that new revenues be raised to finance a full set of health and long-term care reforms. Rather than specify the taxes to be used—a task more appropriate to actual legislation—the commission identified a number of revenue packages that could produce the requisite funds while satisfying three criteria essential to a fair and reasonable package:

- Taxes should be progressive, requiring a higher contribution from those most able to bear increased tax burdens.
- Revenues should be able to grow fast enough to keep up with population and other sources of expenditure growth.
- Contributions should come from people of all ages.

MOVING TOWARD ENACTMENT

In my view, the Pepper Commission blueprint for health care reform can serve as a rallying point for the political consensus that can make universal coverage in an efficient health care system a reality. Criticism of the recommendations' substantial costs and concern about the nation's fiscal health—exacerbated by the savings-and-loan and the Persian Gulf crises—may raise doubts

about that conclusion. However, other evidence supports my belief that knowing what can and should be done will help the Congress move forward.

That evidence comes, in part, from three measures included in the 1990 budget agreement that actually reflected the Pepper Commission recommendations. At the same time the Congress enacted major program cuts to reduce the federal deficit, Congress first expanded protection for pregnant women and children. Federal law now guarantees health care coverage through Medicaid for all poor children by the year 2002 and continuous coverage for low-income women throughout their pregnancies. Second, Congress enacted Medigap insurance reforms that will protect the elderly from risk selection. Third, Congress enacted Medicare coverage for mammograms, reflecting the strong emphasis on preventive services embodied in the commission's benefit package.

These are important steps because they promote access to care and strengthen some of the weakest parts of our health care system. Even more, they reflect the high priority members of Congress believe health care deserves, in spite of fiscal constraints. In fact, congressional leaders have placed health care reform at the top of the legislative agenda for the 102nd Congress that is just now getting under way.

I intend to introduce legislation that embodies the Pepper Commission recommendations early in the 102nd Congress. Its provisions, which emerged in a process that might be considered a microcosm of congressional deliberations, will be assessed and refined in the full legislative process. Hearings will be held, support expanded, and enactment vigorously pursued. I believe we can move toward enactment of health care reform in the 102nd Congress. That reform, even if it is not identical to the Pepper Commission recommendations as they now stand, should incorporate its basic tenets, because they offer a practical means of achieving the universal protection our citizens are coming to demand.

References

1. Blendon RJ, Donolan K. The public and the emerging debate over national health insurance. *N Engl J Med*. 1990;323:200-212.
2. *A Call for Action: Final Report of the Pepper Commission*. Washington, DC: US Government Printing Office; 1990.
3. Rockefeller JD IV. The Pepper Commission report on comprehensive health care. *N Engl J Med*. 1990;323:1005-1007.
4. Levit KR, Freeland MS, Waldo DR. Health spending and ability to pay: business, individuals, and government. *Health Care Financ Rev*. Spring 1989;10:1-11.

The Physicians Who Care Plan

Preserving Quality and Equitability in American Medicine

Ronald S. Bronow, MD; Robert A. Beltran, MD; Stephen C. Cohen, MD;
Paul T. Elliott, MD; Gordon M. Goldman, MD; Seth G. Spotnitz, MD

THE AMERICAN health care system is under siege. The costs of advanced technology continue to overwhelm any short-term savings from managing care. This has led to a crisis situation, creating a need to develop new policies immediately.¹

During the past several years, it has been generally agreed on that we must expand access to health care to all Americans. But how? The issue is whether we should build on the existing employer-based and private insurance system or abandon it and replace it with a taxpayer-financed system. Concerned parties across the country are now choosing sides.

One side argues that, in order to guarantee health care access to all, we should have a national health care program based on the Canadian system.² It is the belief of Physicians Who Care that such a program will not work in the United States.³

We propose, instead, an extensive reshaping of our present health care financing mechanisms. The present system, based on private and public funding, can and should be preserved. However, it also must be revamped so that everyone has access to health care without unduly burdening any one segment of society. Our proposal has five

major elements: (1) universal employer-provided, community-related insurance with high deductibles; (2) individual "Medi-Save" accounts; (3) long-range private funding of Medicare; (4) long-term care separated from Medicaid and Medicaid eligibility expanded; and (5) scientific medical care guidelines. In addition, we offer two minor recommendations affecting the financing of health care: disclosure of physicians' financial incentives and volunteer service by physicians. Before examining each of these proposals, let us first explain why we think the Canadian style of health care is not the solution.

In the Canadian system, which has usually been the model suggested for the United States, the state—not the physician or the patient—makes basic health care decisions. Patients' needs take a backseat to budget constraints. Even though the system puts tight controls on physicians and hospitals and delays buying high technology equipment, funding is finite while patients' demands for care are not.^{4,5} To cope with the current funding crisis, politicians have restricted access to medical care and blamed physicians for deficiencies in the system. According to the president of the Ontario Medical Association, relations between physicians and the government have reached an all-time low. In the view of the Ontario Medical Association, the deterioration of health care in Ontario "demonstrates clearly that government does not have the ca-

pability" to deal with the situation on its own.⁶

Canada, to its credit, has so far managed to constrain health care costs to a relatively stable share of national expenditures. With the aging of the American population and runaway technology, this has proved to be an impossible task in the United States. Canada has also accomplished universality of coverage and eliminated the problems of uncompensated care and an uninsured population.

The most striking difference between Canadian and American spending is in administration and prepayment expenses (costs of handling paper and dollars). Canadians spend 80% less than Americans to administer their universal, comprehensive coverage. In addition, the lack of intrusion into the autonomy of private practice physicians in Canada is in stark contrast to the situation in the United States. American physicians are increasingly frustrated by the micromanagement of individual patients by government and insurance companies.⁷

There is evidence, however, that the honeymoon may be ending for the physicians in Ontario. Bureaucrats there are suggesting that the growth of the physician population, with resultant increased billing, is evidence of irresponsible behavior. It has been suggested that "the number of doctors in the Province should be cut and those remaining should be moved out of the fee-for-ser-

From the National Organization of Physicians Who Care, San Antonio, Tex.

Reprint requests to National Organization of Physicians Who Care, 215 E Quincy, Suite 305, San Antonio, TX 78215 (Dr Bronow).

vice payment mode and into salary and capitation systems.¹⁸

While Americans recognize that the problems of funding our present health care are serious ones, they are not willing to solve these problems by giving up their claim to first-class medicine. At the same time, most Americans want health care to be available to everyone, regardless of ability to pay (*The Washington Post*, April 18, 1990:A27). Fortunately, it is possible to preserve our pluralistic system and guarantee access to care. This can be achieved by our five-part plan.

FIVE-PART PLAN Require Employer-Funded Health Insurance

Today, 33 million Americans have no health insurance.⁹ A nationwide mandate for employer-funded health care insurance would largely remedy this problem. Such coverage would protect two thirds of the uninsured (24 million workers and their dependents); if extended to include the self-employed, it would protect 78% of the uninsured.¹⁰

Currently, only 39% of businesses with 25 or fewer employees offer health benefits, with cost being the most often cited deterrent. Further, most uninsured workers earn too little to afford private coverage of their own.¹¹ To ask small businesses, in particular, to offer health benefits, we must offer a solution that is economically feasible. However, first we must explain the importance of making benefits mandatory.

Only benefits that are mandatory are economically fair. If everyone has basic health insurance, the cost of insurance and health care is shared equitably. At present, people who are poor and uninsured do seek and do receive medical care for serious illnesses and accidents through emergency departments. The cost is then borne by the rest of society—through public subsidy, private charity, or indirect subsidy by third-party payers. Everyone pays more for medical insurance to cover those who receive benefits but who have not contributed to the insurance pool. A report prepared by the Congressional Research Service states that this is a strong argument for requiring all persons eligible for insurance to accept the coverage. It notes, however, that, "it is not necessarily an argument for requiring the level of health insurance coverage ordinarily available in employer-based plans. Society could be indemnified for the risk of free-riders through a very limited insurance package, providing coverage for urgent care only."^{12(p117)}

Mandatory benefits are economically

sound. Costs can be kept down only if everyone, including those at low risk for illness and accident, are part of the insurance pool. In voluntary arrangements, low-risk workers might opt out of the plan in order to receive higher wages or other fringe benefits. This leaves the insurer covering only higher-risk employees, with resultant high rates (the principle of adverse selection).^{12(pp26-27)}

In order not to burden any employer unduly, however, mandatory insurance has to be available at a reasonable cost. This would be achieved through a high deductible, perhaps \$1000, and provide only basic coverage.^{13(pp15-17)} All workers would be covered regardless of "preexisting conditions," and rates would be based on "community ratings." State-mandated coverage would be eliminated.

A high deductible is essential in keeping costs down for two reasons: it discourages a credit card mentality (if medical care is free, overuse is inevitable), and it provides greater value.^{8,12(pp17-18)} At present, some employers offer low deductibles and copayments. Why? Because employee groups demand that their health care benefits be paid from pretax dollars.¹⁴ Unfortunately, since the insurance company pays the bill, neither provider nor patient has an incentive to economize. In Canada, the number of medical services per elderly patient has more than tripled since the institution of the national health program.¹⁵ In the United States, there is evidence that a greater proportion of Medicare beneficiaries are filing claims for services. McMenamin¹⁶ ascribes this to an increase in the number of physicians accepting assignment on all claims, with resultant decreasing costs to patients.

A high deductible makes patients more responsible about health care decisions. Moreover, it also provides more value for the money. Low-deductible policies are expensive, and employers often pay considerably more in premiums than any value the policies hold for their employees. For example, if an employer was to lower the deductible from \$250 to \$100, each dollar of additional coverage would cost \$2.14 in additional premiums. Insurance companies, according to Goodman,¹³ typically spend more than \$50 to process a \$50 medical claim, effectively doubling the cost of small medical bills. The annual premium saved by increasing the deductible from \$100 to \$1000 is nearly \$600.

One more reason for setting a high deductible has to do with the source of health care costs. Major illnesses and catastrophes account for the lion's share

of the health care dollar: between 1929 and 1980, 70% of expenditures went toward the 10% of the population with severe or catastrophic illnesses. In 1980, according to the study by Berk et al,¹⁷ 1% of the population accounted for 29% of all monies spent. On the other hand, 50% of the population accounted for only 4% of health care costs.

Considering this pattern of expenditures, it makes sense to reserve insurance coverage for major illnesses. In addition, policies should have a cap limiting employee liability for physician and hospital expenses. Catastrophic coverage should be triggered when out-of-pocket costs exceed a certain percentage of adjusted gross income.^{12(pp87-99)}

Employees who do wish to buy additional insurance, however, could do so with after-tax dollars, with tax deductibility being determined by a sliding scale of family income. Moreover, basic coverage would not be limited to the employer-provided policy but could instead be chosen from an individually tailored plan. In either event, the employer would contribute the same amount. All \$1000 deductible policies, whether individual or group, would have the same tax benefits (of not being taxable as income). In addition, tax credits should be considered for small businesses and low-wage earners.

It is much easier to obtain health insurance as a member of a group than as an individual. In general, group insurance is issued without medical examinations or other evidence of insurability of the individual members of the group. For individual policies, on the other hand, the insurer requires such evidence. Here, the underwriter evaluates each risk, looking at state of health, medical history, occupation, and habits.^{12(p19)} Applicants are frequently rejected or the policies contain riders because of "preexisting" illnesses. Small businesses, especially those with older employees or employees with preexisting illnesses, may find their premium rates pushed up to an unacceptable level. A recent survey from the Office of Technology Assessment found that, of 2.1 million applications in 1 year for individual health insurance, 20% of the applicants received a substandard risk classification, leading to either a preexisting illness exclusion or an above-average premium.^{12(p82)}

Insurers also examine groups to determine whether they represent acceptable risks. Employee groups found by potential insurers to be at excessive risk will find coverage progressively more difficult to secure and afford under this "experience rating" process. Here, the past experience of the group to be in-

sured determines the premium and whether or not coverage will be provided.^{12(p21)}

A second important feature of our mandated insurance, then, is setting rates for basic coverage according to a "community rating" process. Premium rates would be based on the allocation of total costs to all the individuals or groups to be insured, without regard to the experience of any subgroup. This process has had the advantage of allowing an insurer to apply a single rate or set of rates to a large number of people, greatly simplifying the process of determining premiums.^{12(pp22-23)} It also has the benefit of eliminating the problem of adverse selection. In addition, community rating would eliminate the necessity of creating federal or state risk pools to provide health insurance for high-risk groups or individuals.

State mandates must be eliminated in the interest of keeping costs down. Over 700 laws have been enacted by state legislatures mandating benefits for such things as drug and alcohol abuse treatment, chiropractic care, in vitro fertilization, acupuncture, wigs, and pastoral counseling. These mandates raise insurance rates by as much as 20%. According to one study,¹⁵ one of four people lack health insurance because state regulations have priced it out of the reach of the employer.

To get around such state-mandated benefits, many companies have turned to self-insurance plans. Such plans also allow them to avoid certain regulations and state taxes on insurance premiums. While this avenue is open to some companies, it is not feasible for all and leads to inequities. Eliminating state-mandated benefits and regulations would lower costs for companies that cannot, or do not, self-insure (*New York Times*. August 3, 1990; sect C10:26).

It must be added that the passage of the Employee Retirement Income Security Act in 1974 left self-insured plans essentially unregulated. There are neither standards to ensure adequacy of health care coverage nor safeguards to guarantee that employers will be able to pay claims if they close their business or terminate the health plan. We believe that there must be regulatory safeguards for employees of the self-insured.^{12(pp158-159)}

It can be argued that those companies whose claims experience is below the community average will choose to self-insure. The process of adverse selection would again raise the rates for those remaining in the community. It is our belief that if our plan is enacted, this would be more than balanced by employers reentering the insurance pool.

Mandatory employer-provided coverage would relieve employers of the extra premiums they must now pay to subsidize uncompensated care. In addition, high deductibles, elimination of state-mandated benefits, scientific guidelines for care, and, it is hoped, tort reform should lower premiums significantly. Those employers who self-insure and currently provide generously low-deductible health care benefits should find the new insurance rates attractive.

Our plan is predicated on the assumption that every person will pay his or her fair share to guarantee a high-quality, high technology American health care system. American technology is now overwhelming all attempts to manage care.¹ It is the belief of Physicians Who Care that, unless the American public is willing to pay for quality, they will lose it.

Individual 'Medi-Save' Accounts

Even small medical bills, as well as the \$1000 deductible, can overwhelm people of limited means. As an alternative to lower deductibles or third-party insurers, special medical savings ("Medi-Save") accounts could be established with pretax dollars. As proposed by Goodman¹⁸ of the National Center for Policy Analysis, a Medi-Save contribution (perhaps \$300 to \$500 a year) would be a form of self-insurance, giving workers direct control of their health care dollars. Workers would have strong incentives to be prudent buyers in the medical market place. Medi-Save accounts would eventually become an important source of funds for purchasing additional health insurance or paying for uncovered medical expenses.^{18(pp17-18)}

New Funding for Medicare

The graying of the population and the continued growth of technological innovation put increased pressure on Medicare. At the same time, the federal budget deficit threatens the economic health of the program. Over the past 10 years, the Medicare budget has been cut by more than \$50 billion, with the worst yet to come following the 1990 budget "negotiations."¹⁹ Cuts of this nature are not surprising considering the history of government-financed "entitlement" programs. They are always vulnerable in times of budget crunch. In 1991, the federal government, for the first time, will weigh costs as a factor in deciding whether Medicare should pay for new medical procedures, devices, and drugs. As private health insurers often follow the government's lead in deciding whether to pay for goods or services, this could create an impact far beyond the government's program

(*New York Times*. April 21, 1991;sect 1:1).

Rather than basing Medicare premiums on recipients' incomes, the usual bureaucratic solutions in such situations are to either cut the program or to raise taxes. Fortunately, there is a third solution that would protect the integrity of Medicare: change the nature of its funding. Instead of funding it entirely through taxes received every year, it could be partially funded through medical individual retirement accounts (IRAs). An IRA would be a required purchase for every child in the first year of life. An IRA that cost \$125 and earned 10% annual interest would accumulate to \$65 000 by Medicare age. This money could then be used to obtain private health care to supplement—or replace—government funds. Depending on family income, this one-time \$125 payment could be partially or completely subsidized by the government. The funds accumulated in this reserve would not be used until the individual reaches 65 years of age unless he or she suffers a medical disability before that time. This IRA would be modeled after the present IRA program, where at age 59½ years the money can be removed from the account.

Medi-Save and medical IRA accounts would allow accumulation of funds to be used later to finance acute or chronic health care needs. So far, Congress has refused to consider this avenue for promoting savings and minimizing government interference with medical decisions. This type of funding, at present, is inconsistent with current government policy since the administration is unwilling to divert any source of income. If there were 3 million births at \$125 per year, the government would only be missing \$375 million a year. That is literally a drop in the bucket for a program that would reap such tremendous benefits over the decades.

Revamp Medicaid

Medicaid is another perennial problem. Set up 26 years ago to provide the poor with health care, this joint federal-state health insurance program is now experiencing severe financial difficulties. The number of Medicaid recipients has grown modestly, but expenditures, in contrast, have increased dramatically. Between 1980 and 1989, the number of Medicaid recipients increased by 9%, while expenditures rose an astounding 123%. The Medicaid program has also taken a correspondingly bigger bite out of state budgets: 9% in 1980, but 14% in 1990.

As a sign of how serious the funding problem is, state governments and hos-

pitals have become adversaries. States cut payments; hospitals fight back in the courts. In the wake of a Supreme Court decision (*Wilder v Virginia Hospital Association*) permitting hospitals to sue over Medicaid disputes, hospitals are doing just that. California's 567 hospitals, claiming that they are losing more than \$575 000 a day by treating Medicaid outpatients, have filed a law suit against the California Department of Health Services. The hospitals claim that underpayment has forced closure of trauma centers and emergency departments and has also placed crippling restrictions on a variety of nonemergency procedures, including neonatal care, rehabilitative treatment, and diagnostic medical examinations.²⁰

However, lawsuits only deal with the symptom, not the source of the problem. The primary reason Medicaid is in a crisis is that it dedicates almost half of its payments to long-term care. In 1986, for example, 45% of total Medicaid spending provided only 7% of its eligible population with services in nursing facilities or institutes for the mentally retarded or mentally ill. As the population ages, the problem will only grow worse.^{12(p63)} The solution is to take long-term care out of Medicaid and change eligibility requirements.

Long-term care could then be addressed as a problem that affects the entire population, not just the poor. The solutions are likely to be a combination of private and public programs, such as those proposed by The Heritage Foundation.²¹ Its recommendations include tax incentives, long-term care insurance, new methods of paying for care, and public assistance programs. Specifically, it recommends (1) tax relief to help families who pay for care of their elderly relatives; (2) a federal-state long-term care assistance program; (3) tax exemptions on affordable insurance for long-term care; (4) life insurance policies that convert to long-term care insurance on retirement, with policies paid for with tax-exempt monies; (5) tax-free purchase of long-term care insurance with retirement funds; and (6) home equity conversions allowed for funding long-term care.²¹

Medicaid would then be free to focus exclusively on the health care problems of the poor. Eligibility requirements should be made more flexible and realistic, and new programs should be established so that health care can be made affordable to people who are above the official poverty level but are unable to pay the full cost of their health care. In reviewing several proposals for financing health care for the poor, we support the position of the Health Insurance As-

sociation of America.²²⁻²⁵ Medicaid should cover everyone below the poverty level, regardless of age, employment, or family structure. Eligibility requirements for Medicaid should be separated from eligibility for welfare. Further, persons just above the poverty level should be given the opportunity to buy an income-related package of primary and preventive care. Finally, states should offer spend-down programs for the medically needy. Here, persons not otherwise eligible for Medicaid due to higher incomes would become eligible once out-of-pocket medical expenses had reduced their remaining income to the federal poverty level.

Scientific Guidelines for Medical Care

Most of our suggestions for controlling medical costs involve business, government, and insurance companies. In one area, however, physicians can take the lead. Rather than allowing insurance companies to set health benefits arbitrarily, physicians can insist on the establishment of scientific guidelines for medical care. It is crucial that physicians themselves set up these guidelines, for, as Moran²⁶ noted, "Only physicians, not insurance companies, can change the way physicians practice medicine." Whether local or national guidelines are adopted is not as important as permitting local validation. Only with local validation will the greatest number of physicians participate.

Obviously, it will take time to establish guidelines for every possible medical condition and treatment, but patient and physician preferences for treatment must be given priority. Once the guidelines are established, implementation and monitoring will determine how successful each treatment is.

RECOMMENDATIONS

Disclose Physicians' Financial Incentives

Managed care was designed to produce cost savings and efficient care. In many cases, its promises have not been fulfilled: employers have not seen the savings they had hoped for and employees are becoming increasingly dissatisfied with the quality of care and limits on choice of physicians and treatment facilities (reported in the *St Louis Post Dispatch*, May 12, 1989:F1; November 12, 1989:C3; and April 8, 1990:D1; and the *Wall Street Journal*, February 27, 1990:B1). General Motors, with the support of the United Auto Workers, recently announced that it was "sending a message" about the "quality and access"

of health maintenance organizations (HMOs), as it dropped six plans and encouraged employees not to enroll in 19 others.³⁰ The Florida Department of Insurance notes that, since 1988, 1628 complaints have been filed against Humana managed care plans (*Sun-Sentinel*, October 21-24, 1990:2). Little more than one third of these were from the Medicare component, indicating that the majority of problems were not from federal regulations, but instead from the basic structure of the plans.

We are concerned that, in many "for-profit" HMOs, the quality of and access to services is secondary to the generation of a profit for the corporation. This creates, for the physician, a basic conflict of interest: physicians are rewarded for deliberately limiting care. The director of quality assurance for Humana Health Plans of South Florida agrees: "In any HMO there is financial incentive to hold back on services" (*Sun-Sentinel*, October 23, 1990). Those HMOs that put physicians in a "gatekeeper" role by offering financial rewards or penalties for tests or referrals place physicians in an ethically and professionally untenable position.³¹ A recent study on Medicare HMOs done by the General Accounting Office concluded that, "the incentives of a capitation payment system may encourage the inappropriate reduction of necessary services."³² Approximately 30% of Medicare HMO patients disenroll within 2 years, an indication of serious dissatisfaction with the plan.³³

Physicians must feel free to make medical decisions based on the needs of the individual patient, without fear of economic sanctions or reprisals. By the same token, insurers must reveal to the patient in advance the financial incentive of the physician.³⁴ So far, legislation that would make full disclosure a law has been supported by the Massachusetts and Missouri medical associations.^{35,36} More state medical associations should follow their lead.

Volunteer Service by Physicians

It will take time for all of our proposals to be implemented. For that reason and as a gesture of good will, we recommend that physicians devote 1 day a month to caring for persons who are unable to afford medical services. Members of Physicians Who Care are strongly urged to donate their services in their communities, making no charges and accepting no payments, and letting the community know that this is part of the Physicians Who Care volunteer program. By stepping forward in this way, we hope to encourage other physicians to follow our lead. We believe it is our

responsibility to society.

CONCLUSION

Some people are now advocating that we dismantle our present system in favor of a nationalized system financed by taxes. Our political and economic climate, however, discourages such a drastic change. On the other hand, many lawmakers are interested in expanding access to health care, but they want to do so in incremental stages. Because our current system of financing and providing health care services is so large and complex, step-by-step changes make much more sense than sweeping reform. Building on a system of private insurance encourages innovation, preserves freedom of choice for consumers, and offers autonomy for providers. We believe it is the only reasonable solution.

References

1. Iglehart J. A conversation with William B. Schwartz. *Health Aff.* 1989;19:71-73.
2. Woolhandler S, Himmelstein DU. A national health program: northern light at the end of the tunnel. *JAMA.* 1989;262:2136-2137.
3. Bronow R. A national health program: abyss at the end of the tunnel—the position of Physicians Who Care. *JAMA.* 1990;263:2488-2489.
4. Selmon C. *Health Care in Ontario: Ontario Libertarian Party Position Paper.* Toronto: Ontario Libertarian Party; 1989.
5. Johnston B. OMA joins with other service groups to focus attention on health-care deficiencies. *Ontario Med Rev.* 1990;57:8-9.
6. Fletcher RD. The shape of things to come. *Ontario Med Rev.* 1990;57:1-4.
7. Evans RG, Lomas J, Barer ML, et al. Controlling health expenditures: the Canadian reality. *N Engl J Med.* 1989;320:571-577.
8. Fletcher RD. A question of justice. *Ontario Med Rev.* 1990;57:12.
9. Louis W. Sullivan. Forum on health care costs. Presented at Stanford University; October 23, 1990; Stanford, Calif.
10. Monheit AC, Short PF. Mandating health coverage for working Americans. *Health Aff.* 1989;8:22-38.
11. Nadel M. *Health Insurance: Availability and Adequacy for Small Businesses.* Washington, DC: General Accounting Office; 1989. Publication T-HRD-90-02.
12. Congressional Research Service. *Insuring the Uninsured: Options and Analyses.* Washington, DC: Library of Congress; 1988.
13. Goodman JC. *An Agenda for Solving America's Health Care Crisis: Task Force Report.* Dallas, Tex: The National Center for Policy Analysis; 1990.
14. Reinhardt UE. Health care spending and American competitiveness. *Health Aff.* 1989;8:10.
15. Lomas J, Hertzman C, Barer M, Pulcins I, Evans R, Anderson G. *The Great Transformation of the British Columbia Hospital Sector: Policy Design or Political Accident for the Elderly?* Vancouver: University of British Columbia; 1990. Publication HPRU 90:21D.
16. McMenamin P. What do economists think patients want? *Health Aff.* 1990;9:112-119.
17. Berk ML, Monheit AC, Hagen MM. How the US spent its health care dollars: 1929-1980. *Health Aff.* 1988;7:46-60.
18. Gabel JJ, Jensen GA. The price of state-mandated benefits. *Inquiry.* 1989;26:419-431.
19. Tupper CJ. Dreams, dollars, and deeds: the sacred fire and health access America. *JAMA.* 1990;264:1150-1152.
20. Burda D. The search for Medicaid money. *Mod Healthcare.* 1990;20:20-27.
21. Haislmaier ES. Making long-term health care more affordable. *Background.* 1990;755.
22. Dickman RL, Ford AB, Liebman J, Milligan S, Schorr AL. An end to patchwork reform of health care. *N Engl J Med.* 1987;317:1086-1088.
23. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy. *N Engl J Med.* 1989;320:29-37, 94-101.
24. Himmelstein DU, Woolhandler S, the Writing Committee of the Working Group on Program Design. A national health program for the United States: a physician's proposal. *N Engl J Med.* 1989;320:102-108.
25. Waitzkin H. Why it's time for a national health program in the United States. *West J Med.* 1989;150:101-107.
26. Evans RG, Lomas J, Barer MI, et al. Controlling health expenditures: the Canadian reality. *N Engl J Med.* 1989;320:571-577.
27. *For the Health of a Nation: A Shared Responsibility.* Washington, DC: National Leadership Conference on Health Care; 1989.
28. Curtis R. *Health Insurance in the Small Employer Market, Testimony Before the Subcommittee on Antitrust, Monopolies, and Business Rights.* Washington, DC: Committee on the Judiciary; 1990.
29. Moran D. The Blues/ACP testing guideline: lessons from the past. *Rep Med Guidelines Outcomes Res.* 1990;1:10.
30. Kendel P. General Motors drops six HMOs, brakes enrollment in 19 others in effort to cut costs. *Mod Healthcare.* 1990;20:3.
31. Toward full disclosure of referral restrictions and financial incentives by prepaid health plan. *N Engl J Med.* 1987;317:1729-1734. Sounding Board.
32. Wagner L. Medicare HMOs lack quality safeguards—GAO. *Mod Healthcare.* 1991;21:8.
33. *Managed Care and the Medicare Program: Background and Evidence.* Washington, DC: US Congressional Budget Office; May 19, 1990. CBP Staff Memorandum.
34. Financial incentives for physicians in HMOs: is there a conflict of interest? *N Engl J Med.* 1987;317:1743-1748. Special Report.
35. An act relative to public disclosure by health insurers. The Commonwealth of Massachusetts. House Act No. 3812. 1989.
36. General Assembly of the State of Missouri. House Bill No. 247, introduced by Representative Harpool. 1990.

Restructuring Health Care in the United States

A Proposal for the 1990s

Donald O. Nutter, MD; Charles M. Helms, MD, PhD;

Michael E. Whitcomb, MD; W. Donald Weston, MD

A PLAN for restructuring the US health care system to achieve universal access to medically necessary health care services has been developed by the Medical Schools Section of the American Medical Association (AMA). The plan is a pluralistic approach to comprehensive system reform that requires both individual and institutional responsibility for the achievement of quality health care. A set of broad strategies are proposed to reach the goal of universal access to care in the context of responsible containment of health care costs. The plan proposes to achieve universal access through reform of our existing system of health care as follows: by restructuring and reforming Medicaid and Medicare, by supporting universal provision of necessary health benefits through employers; and by the creation of regional insurance pools for those individuals who are not covered by government programs or through their workplace. The additional cost of these strategies for universal access would be shared by government, business, and the health care consumer. Mechanisms are proposed to control hospital and physician service costs and to reduce the volume of unnecessary services that are provided.

Uncontrolled health care costs, inequitable access to care, concerns about quality, and a bureaucratic morass in the administration of health insurance programs have evoked widespread interest in restructuring the health care system in this country. Calls for reform from business, labor, government,

health professionals, and the general public have focused on containing costs, enhancing the quality of care, and providing access to necessary health services for all our citizens. Recent proposals for reform of the system reflect the diverse views that are present in our society regarding the role of the individual and public and private institutions in the provision, financing, and regulation of health care.¹⁻⁵

Although the concept of a federal national health insurance program has resurfaced in the debate on health care, the political-economic outlook for enactment of this solution appears to be slim at present. An alternative strategy requires building social consensus for a coherent series of reforms, involving both public and private institutions, that will achieve the desired objectives. In this context, the majority of policymakers and proposals for reform of our health care system have accepted the existing pluralistic approach to financing health care as the basis for any comprehensive approach to system reform. This viewpoint seems compelling when one considers the reluctance on the part of the federal government to increase the nation's tax burden; the relatively fixed public budget that is available to fund education, health care, and the nation's infrastructure; and the recent history of increasing public debt (deficit spending) that has been required to maintain a fixed budget for domestic social programs.⁶

The AMA has recently introduced its own proposal for reform of the US health care system entitled "Health Access America."⁶ The AMA has also asked its Medical Schools Section to engage members from academic medicine in a policy and planning process aimed at reform of health care provision and financing that would correct substantial defects in the existing system. In response to this challenge, the Medical Schools Section requested that the authors of this report develop the basic elements of a plan for restructuring the US health care system. Although similar in many areas, a number of elements in the resultant proposal differ from, or may be in conflict with, those in the

AMA's "Health Access America" plan.

A PLAN FOR RESTRUCTURING HEALTH CARE

The goal of this plan is universal access to medically necessary health care services. These services should include disease prevention and health promotion, medical and mental health care, rehabilitation of physical and mental disability, and long-term care. The following nine objectives for comprehensive system reform should be pursued to achieve the overall goal:

- Appropriate roles must be defined for business, government, and the individual in financing health care for all citizens.

- The system must be organized and financed in a manner that will ensure responsible cost containment.

- Administration of the system must be simplified to the extent possible in a pluralistic model.

- A universal system of quality assurance based on practice standards must be developed.

- Effective methods of technology assessment that focus on clinical outcomes must be developed and linked to the process for quality assurance.

- Public and private support for basic biomedical research and the development and evaluation of diagnostic and therapeutic technologies must continue.

- Academic medicine must be more responsive to the nation's health manpower needs in the areas of primary care and geographic distribution.

- Health care payers must continue to share responsibility, and in some cases accept greater responsibility, for the support of graduate medical education to meet the nation's health manpower needs.

- The effectiveness of a restructured system must be measured against those changes in the health status of the nation's citizens that can be influenced by medical services.

Achievement of these system objectives and universal access to health care will require that we resolve the present conflict in health care between individual and societal needs. This issue is central to many problems in our health care system and is explored by Bulger⁷ through what he characterizes as the Hippocratic and bureaucratic themes in American health care.

STRATEGIES TO ACHIEVE HEALTH CARE RESTRUCTURING

In order to restructure and reform the health care system, and thereby provide an incremental increase in benefits, integrated policies and strate-

From the Office of the Vice Dean, Northwestern University School of Medicine, Chicago, Ill (Dr Nutter); the Department of Internal Medicine, University of Iowa College of Medicine, Iowa City (Dr Helms); the Department of Internal Medicine, University of Washington School of Medicine, Seattle (Dr Whitcomb); and the Department of Radiology, Michigan State College of Human Medicine, East Lansing (Dr Weston).

This work was sponsored by the Medical Schools Section of the American Medical Association, Chicago, Ill. The policy opinions expressed in this report are those of the authors, and may not reflect those of their academic institutions or the American Medical Association. Drs Nutter, Helms, and Whitcomb previously served as Robert Wood Johnson Health Policy Fellows at the Institute of Medicine, National Academy of Sciences, Washington, DC.

Reprint requests to Northwestern University Medical School, 303 E Chicago Ave, Chicago, Ill 60611-3008 (Dr Nutter).

gies must be developed at the national level. Policies and implementation strategies, if they are to successfully engage the support of major health care constituencies, must be comprehensive, ie, they must address the issues of improved access to care, cost containment, administrative simplification, quality assurance, and an adequate supply of primary care manpower. We are proposing a comprehensive set of strategies that address these concerns, but in doing so realize that they will require hard choices and in some cases present business and government with financial dilemmas. In realistic terms, incremental change is likely to be required. The highest priority for reform and restructuring under these conditions is access to care for the uninsured.

Universal Access to Health Care

A Federalized Medicaid Program.—Medicaid should be restructured to provide a comprehensive package of medically necessary health benefits for all poor Americans. The federal government should establish national criteria for determining eligibility for the program in order to provide all the nation's poor and near-poor with access to care, regardless of their state of residence. The restructured Medicaid program should be financed by the federal government under a new arrangement. A separate federal trust fund should be established to pay for the costs of providing preventive, acute, and restorative care to the poor. The proposed Medicaid trust fund should be financed by additional tax revenues to be raised by taxing employment-based health insurance benefits.

Medicaid should not be the source of funding for long-term care services. The federal Medicare program should provide inpatient long-term care benefits for the severely disabled and the elderly. Necessary home and community care programs for the disabled and the elderly should be financed at the state level using local revenues currently devoted to the Medicaid program.

Medicare Reform.—The current government subsidy provided to the elderly through the Medicare program should be continued, since it is consistent with the income maintenance principle embodied in the Social Security program. Medicare should be restructured, however, to provide all elderly citizens with a comprehensive health benefits package, including protection against catastrophic costs, as well as providing long-term care for severely disabled individuals of all ages.

The program's expansion of benefits for the elderly should be financed, in

large part, by the elderly using a graded premium scale based on personal financial status. The authors believe a comprehensive, single-source insurance program for the elderly, with an appropriate level of individual cost sharing, is highly desirable, not withstanding recent failed legislative attempts to address this issue. If the additional funds needed to federalize Medicaid and reform Medicare cannot be realized through appropriate levels of taxation on employment-based health benefits and copayment by the elderly, an increase in general tax revenues should be legislated. Any additional federal taxes to support these programs should be progressive in their structure.

Universal Employment Benefits.—All individuals who are not covered by the Medicare or Medicaid programs should have access to a comprehensive health benefits package. The source of this health plan would vary depending on the circumstances. All employers would be required to contribute to the funding of health insurance for their employees. Universal provision of necessary health benefits by employers will require tax reform to credit small business for the provision of health benefits, the availability of rate-competitive group insurance plans that use community rather than experienced-based rating, and the elimination of state-mandated health benefits. Recent estimates of the potential for mandatory health benefits through the workplace to correct the problem of medical indigency indicate that if all employees who are working 20 hours or more a week and their dependents were covered by their employers, two thirds of the currently uninsured would be covered.⁸

Individuals who are not covered by employment-based health insurance and are unable to afford an individual health insurance plan, eg, many who are self-employed and those who are medically uninsurable, should be offered access to subsidized group insurance plans or risk pools that are operated at a regional level. Plans should be encouraged to provide long-term care options, and these benefits should be classified as health insurance benefits for purposes of individual tax deductions. In order to ensure that all privately financed health insurance plans contribute equitably to government programs that provide access to citizens who are too poor to purchase health insurance or who are categorically ineligible for the Medicare and Medicaid programs, the Employee Retirement Income Security Act should be amended to permit state regulation of employer-based self-insurance plans. This change in the Employee Retirement Income Security Act would

allow states to spread the costs of subsidizing or operating group plans for needy individuals who are not categorically eligible for government programs among all privately financed health plans.

Containment of Health Care Costs

Individual Responsibility.—Cost sharing by individuals must be an important component in the effort to restrain the rate of growth in health care costs while funding universal access to care. Individual citizens should be required to assume greater responsibility for their own health. In addition to adopting a more healthy life-style, individuals should bear, to the extent possible within their means, the costs of purchasing health insurance, as well as making copayment and first-dollar deductible payment for the medical services they use.

The government's responsibility for subsidizing the purchase of health insurance, or paying for health care services, should be limited to those citizens who do not have the financial means to bear the costs themselves. The costs of health insurance that are provided to individuals as a benefit of employment should be included in the calculation of the individual's taxable income. Exclusion of the costs of employee health benefits under existing tax law represents a substantial government subsidy for citizens who are fully capable of bearing the cost of purchasing health insurance themselves. By considering the cost of employee health benefits as taxable income, and through the increased use of copayment and deductibles for first-dollar coverage, employees will be more cost conscious when making decisions to use health care services. The additional tax revenue that would be realized by eliminating the exclusion of employee health benefits from taxation should be earmarked for the proposed Medicaid trust fund that would finance health care services for the poor.

Prospective Pricing and Payment.—A second essential component, if we are to have affordable universal access to health care, is all-payer prospective pricing and/or payment for hospital and professional services. Reimbursement of hospitals in each state should be based on an all-payer, diagnosis related group (DRG) system. If the Medicare DRG system is used to implement this strategy, it probably will require adjustment to ensure that equitable funding is provided to hospitals in rural and underserved areas. A Resource-Based Relative Value Scale (RBRVS) should be adopted as the basis for paying physicians for services that

are provided to beneficiaries of Medicaid and Medicare. The government should encourage private payers and intermediaries to adopt a similar RBRVS by writing appropriately designed incentives into the laws governing taxation of privately funded health insurance plans.

Control of Service Volumes.—Recent experience in the United States and other Western nations suggests that containment of total health care costs, short of using central budgeting for all services, requires the use of prospective pricing, measures to control the volume of services that are provided, and the regulation of capital expenditures by hospitals and health care corporations.^{9,10} Both price controls and the elimination of unnecessary services will be necessary if we are to control the aggregate expenditure on health care, while retaining the ability to introduce new technologies that have the potential to substantially reduce mortality and morbidity from illness. Adopting a universal RBRVS without controlling the volume of services that are provided is unlikely to be an effective means of controlling the rate of growth in the cost of physician services. Government and private payers, therefore, should use expenditure targets with the RBRVS to reduce the volume of unnecessary services provided. This approach may be easier to implement, and more widely accepted by consumers and providers, than requiring that all health plans be based on capitated payment to control the volume of service. Negotiation of adjustments in both the RBRVS and the expenditure targets of various payers should occur on a regular basis between payers and providers.

Quality Assurance

Attention to quality assurance will be necessary, if a reformed health care system is to benefit patients. In addition, the level and rate of growth in health care costs may be reduced, in part, by measures designed to improve the quality of care. The effectiveness of, as well as the rationale for, technology assessment and quality assurance programs as cost-containment strategies in our health care system is an unresolved issue.¹¹ The main thrust of the strategy should be to improve clinical decision making and modify practice patterns, thereby curtailing the unnecessary use of diagnostic and therapeutic technologies.

A strategy to improve quality should be based on three important approaches. First, academic medical centers should accept responsibility for expanding health services research activities

that are directed at defining quality care and developing practice guidelines to guide physicians in their treatment of patients. In addition, undergraduate and graduate medical education programs should include more material on health policy, medical economics, and quality assurance activities in their curricula. Second, payments to physicians and health care facilities that provide therapeutic or diagnostic technological support must be designed to stop the inappropriate use of these technologies, as well as the unnecessary duplication of the facilities required to perform these expensive services. Third, a comprehensive program should be established at the national level to evaluate the efficacy and appropriate use of new technologies before their widespread introduction to practice. A recent study by the Institute of Medicine has examined the questions of how to evaluate quality and improve health care through quality assurance, and has proposed a new quality review system for the Medicare program.¹²

These quality control strategies should be supported by the following two legislative actions. First, appropriations for the extramural grant programs and technology assessment activities of federal agencies should be increased. Efforts should be focused on the recently created federal Agency for Health Care Policy and Research, which has the potential to coordinate national activity in technology assessment as well as the study of practice patterns and guidelines. Second, the schedule for incorporating capital costs into Medicare's DRG payment should be accelerated. Reimbursing hospitals for fixed or movable capital expenses on a cost basis does not place fiscal constraints on the institution's capital acquisition decisions. In order to include all sources of capital funding in this strategy, privately funded health insurance plans should adopt prospective payment systems, as recommended above, that incorporate regional or national payment schedules similar to those used by the federal Medicare program.

Regional Health Insurance Agencies

All insurers, both private and government, should be required to develop common formats for explaining benefits, uniform enrollment procedures, and centralized claims processing as a means of simplifying and reducing the administrative costs of the health care system.

A clear need exists to simplify or streamline the format or process for the packaging and dissemination of health

insurance information; enrollment in insurance plans; and billing and payment activities for all consumers, payers, and providers. This agenda should be addressed through nonprofit health insurance agencies that would be established on a regional basis. The agencies, if established and operated appropriately, could serve to centralize and streamline public and private health insurance program administration on a regional basis, and in so doing reduce the aggregate costs of administration. These agencies would have the following responsibilities: (1) to serve as the source of standardized information on all available health insurance plans (government and private); (2) to serve as a purchasing agent for all health insurance plans from private insurance carriers and health maintenance organizations; (3) to operate the necessary group plans or risk pools for those individuals without other means of access; and (4) to serve as a clearinghouse for all provider billing and payment functions related to both public and private insurance programs. These agencies, however, should not be responsible for setting hospital or professional payment rates. This function should be retained by the payers.

Primary Care Services

Universal access to care at an affordable cost will require an adequate supply of primary care physicians. Undergraduate and graduate medical education programs must play a responsible role in meeting this need. Medical schools must provide adequate time through their curricula for student exposure to primary care in ambulatory as well as inpatient settings. Program directors in family medicine, internal medicine, and pediatrics, with the support of the Accreditation Council for Graduate Medical Education's residency review committee for each specialty, should develop innovative curricular tracks designed specifically to train physicians for practice in underserved rural and urban sites. Appropriations for primary care training grants provided under the provisions of Title VII of the Public Health Service Act should be increased to allow the expansion of training programs in family medicine, general internal medicine, and general pediatrics.

A medical education loan forgiveness program, funded by federal and state government, should be developed to encourage medical students to prepare for, and practice in, a primary care specialty. The program should provide partial loan forgiveness to practitioners who engage in family medicine, general internal medicine, and general pediatrics. A greater level of forgiveness should be provided

for those physicians who choose to locate their practices in underserved rural or urban areas. In addition to loan forgiveness programs, the RBRVS should be adjusted to provide reimbursement incentives that will encourage physicians who are in needed specialties to practice in underserved areas.

Recognizing the importance of public facilities, as opposed to physicians' offices, as sites for providing health services to most urban and some rural underserved citizens, federal and state appropriations that support all forms of community health centers should be increased. Attempts should be made to integrate local-area funding for the operation of public health care facilities with state and federal support designated for community facilities and programs. In some areas, underutilized Veterans Affairs health care facilities might be appropriate sites for these health centers. Where feasible, the establishment of linkages between these community centers and educational programs should be encouraged.

COMMENT

The most ambitious formula for universal access to health care and responsible cost containment appears to be a federal national health insurance program. It seems unlikely, however, that a national health insurance program will receive the broad support necessary to achieve a legislative mandate in this decade. A major factor supporting this viewpoint is the failure of health care payers, providers, and consumers to develop consensus on a national health care policy, or an agenda for health care reform.¹³ Other factors that militate against the formation of a national health insurance program include the widespread agreement that our system should remain pluralistic with substantial roles for both public and private payers, and a lack of confidence in comprehensive government social programs that is based on a record of inefficiency, rationing of services, and the perception of excessive regulation. Interestingly, the formation of a national health insurance program at present appears to have more support from the business community, which has become seriously concerned with the escalating costs of health benefits programs, than from the government or the public at large.

Traditionally, health care in the United States has been a joint venture between the public and private sectors, with emphasis on employment-based health benefits and government programs for selected groups, such as the elderly, the poor, the military, and war veterans. Most of the recent plans for comprehensive restructuring of the sys-

tem and the achievement of universal access, including our present proposal, conform to this pluralistic model.

Our plan, if fully implemented, should result in universal access to medical care by virtue of (1) a federalized Medicaid program for all citizens who are below the poverty line, which could be extended by means of a "buy-in" to those citizens who are below 200% of the poverty limit; (2) comprehensive medical care for the elderly, and long-term care for the elderly and disabled through Medicare; (3) provision of a health benefits plan by all employers; and (4) subsidized, regional health insurance pools for those individuals who are not covered under the preceding programs. The strategy for limiting public and private sector expenditures for the health benefits defined in our proposal calls for universal application of DRG and RBRVS mechanisms to the pricing of hospital and physician services, coupled with the use of expenditure targets by all payers, so that fiscal performance would guide adjustments in the level of reimbursement for services from a health plan or a provider group.

Additional elements that should contribute to cost containment include added cost sharing through deductibles and copayment to reduce the demand for services by consumers who are able to pay, and the development of practice guidelines and quality assurance programs to discourage the unnecessary use of technology and services. Our proposal to create nonprofit regional health insurance agencies to simplify the process of enrollment in benefit plans, operate insurance pools, and centralize billing and payment for a pluralistic system of payers and intermediaries could contribute to cost containment efforts but at the least should greatly simplify operations for both patients and providers.

If this plan, or any similar program, is to be accepted and implemented, two issues must be addressed in a manner that will prove satisfactory to health care payers and consumers. In the first instance, a comprehensive package of health care services that would constitute the minimum level of benefits to be provided by all public and private plans must be defined. It will be necessary to set a basic benefit level for preventive medicine services, acute care (including that for mental illness), rehabilitation, and long-term care. At the same time, we must decide whether all insurance plans (eg, Medicare, Medicaid, employee benefit plans, and risk-pooling programs) would be required to offer the same minimum benefits package. These are difficult issues, the answers to

which will be influenced by a number of factors, including the total price the nation is willing to pay for health care, the effectiveness of proposed cost containment mechanisms, and the degree to which we are willing to tolerate a multi-tiered system of health care benefits. We have not addressed the basic benefits question since it falls beyond the scope of this project, and its solution almost certainly will require panels of experts from many disciplines.

The second issue is to determine what additional costs would be incurred by public and private payers if the reform and innovation in health insurance programs advocated in this plan are implemented. Estimating these costs is difficult since even a simple, but realistic, calculation of supplemental costs to public and private payers requires a complex series of assumptions and estimates. Critical determinations include the potential reductions in current costs resulting from reform and restructuring, the magnitude of cost shifting between public and private payers that would occur as a result of restructuring, the minimal level of benefits to be mandated in the various plans, and, finally, the additional costs of including those individuals who are presently uninsured in the new system.

Some would argue that the additional costs required to achieve universal access to health and long-term care are prohibitive. We disagree and believe that recent cost estimates and the proposed revenue sources for system reform are manageable.^{2,4,14} For example, Thorpe and Siegel¹⁴ have analyzed the new costs that would be incurred by enacting various combinations of expanded Medicaid and employer health insurance coverages. The public cost, as expressed in 1989 dollars, is estimated to range from \$11.5 to \$29.5 billion. If, for example, Medicaid eligibility was extended to the poverty line for all citizens, and those individuals who were between 100% and 200% of the poverty limit were permitted to buy-in by paying a premium, and all employers were mandated to provide health insurance, the new public cost would be estimated at \$17.1 billion. Regardless of the approach selected to achieve universal access to health care, there is little doubt that reasonable control of the total expenditure level, as well as the annual growth in costs for a restructured system, will require implementation of cost containment mechanisms similar to, if not more comprehensive than, those we have proposed.

Several innovative plans recently proposed for health care restructuring have stimulated debate about our

health care system in many quarters. Three of these plans propose broad changes in our existing pluralistic structure for the provision and financing of care and are similar in many ways to the present proposal. Enthoven and Kronick¹ have proposed mandatory employer health coverage of full-time workers, continuation of Medicare and Medicaid, and federal incentives for states to act as "public sponsors" of private insurance plans for those individuals who are not otherwise covered. Their plan emphasizes choice by the consumer of managed-care plans that are competitive on the basis of cost and service. It is not immediately evident that their "public sponsor" program, in concert with the present Medicare and Medicaid programs, would be able to achieve universal access to health care.

The National Leadership Commission on Health Care has clearly articulated the problems related to cost, access, and quality of care that plague our present health care system.² Their Universal Access Plan calls for the definition of a basic health services package and a shared responsibility by the public and private sectors for the provision and financing of care for all citizens and coincides with the key objectives and principles presented in our plan. We also commend the commission's proposal for a national quality improvement initiative. A basic option health care version of the Universal Access Plan is estimated to cost \$76.2 billion in 1988 dollars.² In this case, the funding is to be obtained from existing federal and state Medicaid funds, and the fees paid by individuals and employers who do not provide health insurance. The Universal Access Plan, however, may lack the critical strategic elements necessary to guarantee access and responsible cost containment. In the case of access, failure to propose reforms in the Medicare and Medicaid programs, or to mandate health insurance coverage by all employers, leaves potential gaps in a safety net to ensure universal coverage. Regarding cost containment, the commission's reliance on quality improvement as the key to controlling costs, without seeking specific reimbursement mechanisms to control the pricing and volume of services provided, may not prove to be effective.

The Pepper Commission report offers a sound plan for universal access to health care through the replacement of Medicaid with a comprehensive public plan for the uninsured and a series of incentives for expanded health insurance coverage in the workplace that is similar to our proposal.⁴ A comprehensive approach in the commission's re-

port designed to meet the increasing need for access to long-term care by all segments of society deserves high marks. In this plan, the financing of long-term care would be a shared responsibility of state and federal government and the individual. The commission's public insurance plan, when fully implemented, would cost \$66.2 billion (\$23.4 for full access to health care and \$42.8 for access to long-term care) expressed in 1990 dollars. This estimate includes existing Medicaid dollars, new tax revenues, and payment from employers who choose not to provide private insurance. How the additional revenues required for the public health insurance program would be generated is not specified. Despite the advantages of this proposal in terms of programs for health and long-term care, the authors believe that comparable results can be obtained in a more straightforward manner by the reform and restructuring of Medicaid and Medicare. In view of the additional costs that this program would add to the nation's health care budget, the plan does not appear to contain sufficiently rigorous cost containment strategies.

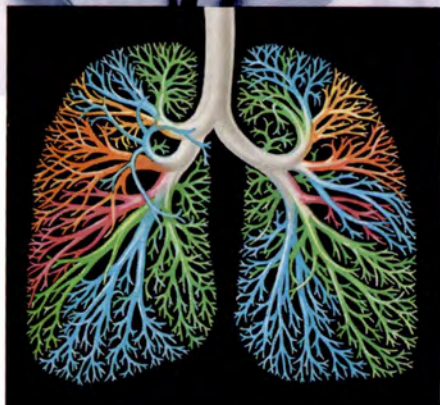
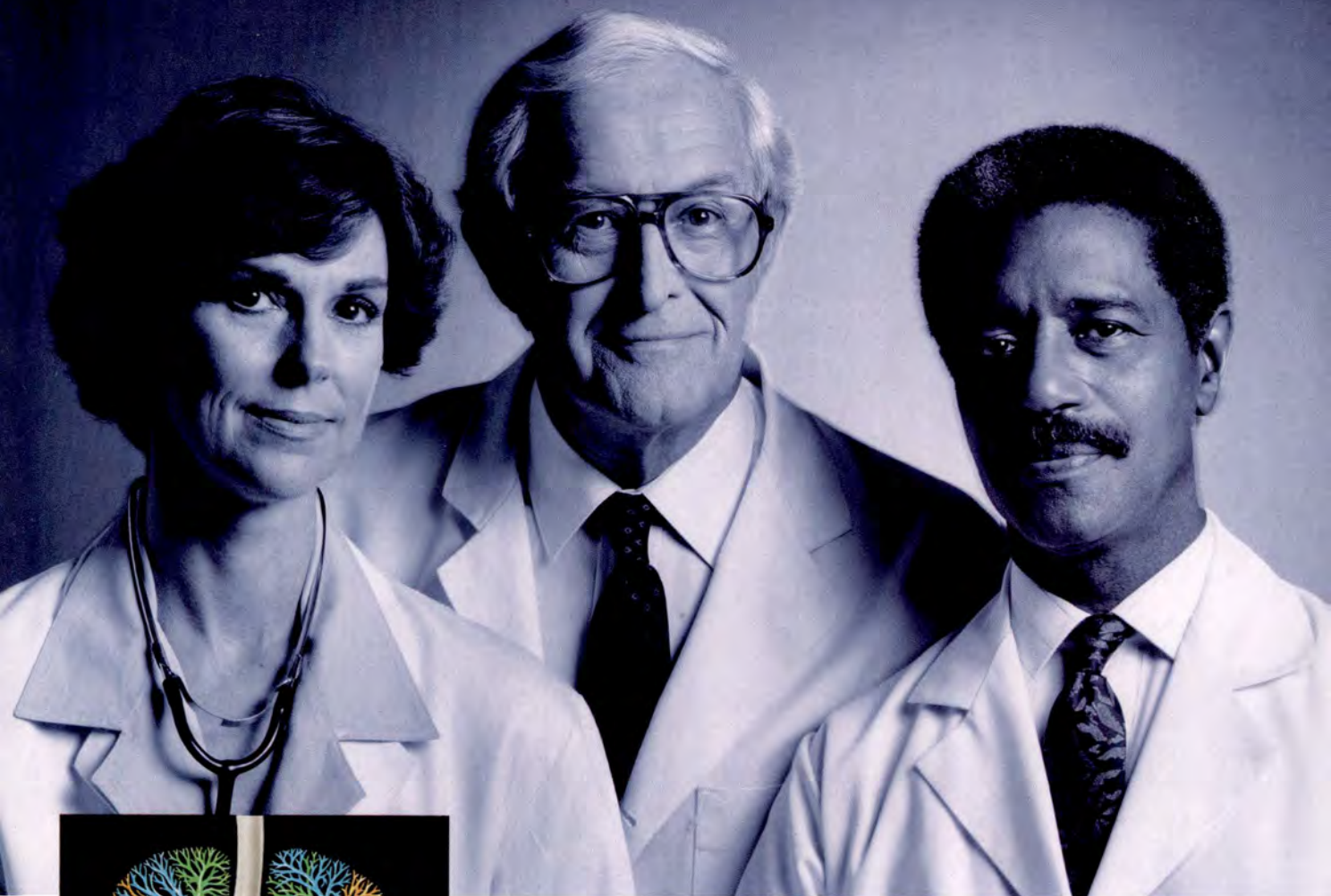
The likely alternative to comprehensive reform of the health care system at the national level is a variety of local solutions introduced state by state. Widespread activity on health care issues is under way in most state governments and many proposals for health care reform are pending or are in the process of being enacted. One of the most comprehensive, UNYCare, has been proposed by the New York State Commissioner of Health. Individual state action on health care, however, may prove to be inefficient in both administrative and fiscal terms. From the point of effectiveness, the local approach may leave important gaps in access to care, and could present problems for nationally based corporate employers who seek uniform benefits and rates from insurance intermediaries and/or providers. Although local initiatives are often innovative, and sometimes successful at correcting specific local problems, there is mounting evidence that they are failing; for example, there are excessively restrictive eligibility requirements and subcost reimbursement levels in the Medicaid programs of many states, there are budget shortfalls that preclude funding for recent health care initiatives in Massachusetts and New York, and there are low enrollments in some state risk pool ventures for the medically uninsurable. Although more difficult to achieve, a set of coherent health care system reforms enacted at the national level will be necessary, in

our opinion, to solve the problems in our present system.

In conclusion, we encourage the health professions and academic medical centers to work with business and government to achieve the goal of providing universal access to comprehensive, medically necessary health and long-term care services in a manner that is compatible with the principles and objectives outlined in this report. Several major strategic initiatives will be required to achieve this goal. Fundamental changes in the administration and financing of public and private health insurance must occur. Providers, business, and government must commit to contain the cost of health care through the prospective determination of prices for services and reduction in the volume of unnecessary services provided. Increased effort must be devoted to quality assurance aimed at the widespread use of appropriate practice guidelines and cost-effective clinical decision making. Finally, a concerted effort by government and the nation's academic medical centers is necessary to provide adequate numbers of primary care physicians to serve the public, especially in medically underserved areas.

References

1. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy. *N Engl J Med*. 1989;320:29-37, 94-101.
2. National Leadership Commission on Health Care. *For the Health of a Nation: A Shared Responsibility*. Ann Arbor, Mich: Health Administration Press; 1989.
3. Himmelstein DU, Woolhandler S. Writing Committee for the Working Group on Program Design. A national health program for the United States: a physician's proposal. *N Engl J Med*. 1989;320:102-108.
4. *Preliminary Recommendations to the Congress by the Pepper Commission*. Washington, DC: US Bipartisan Commission on Comprehensive Health Care; 1990.
5. *Health Access America: The AMA Proposal to Improve Access to Affordable, Quality Health Care*. Chicago, Ill: American Medical Association; 1990.
6. Reinhardt UE. Health care spending and American competitiveness. *Health Aff*. 1989;8:4, 5-21.
7. Bulger RJ. *Technology, Bureaucracy and Healing in America: A Postmodern Paradigm*. Iowa City: University of Iowa Press; 1988.
8. Monheit AC, Short PF. Mandating health coverage for working Americans. *Health Aff*. 1989;8:4, 22-38.
9. Aaron H, Schwartz WB. Rationing health care: the choice before us. *Science*. 1990;247:418-422.
10. Fuchs VR. The health sector's share of the gross national product. *Science*. 1990;247:534-538.
11. Ginzberg E. High-tech medicine and rising health care costs. *JAMA*. 1990;263:1820-1822.
12. Lohr KN, Schroeder SA. Special Report: a strategy for quality assurance in Medicare. *N Engl J Med*. 1990;322:707-712.
13. Ginzberg E. US health policy—expectations and realities. *JAMA*. 1988;260:3647-3650.
14. Thorpe KE, Siegel JE. Covering the uninsured: interactions among public and private sector strategies. *JAMA*. 1989;262:2114-2118.



IN LOWER RESPIRATORY INFECTIONS

CIPRO® MAKES A TOUGH THERAPEUTIC CHOICE EASIER.

Cipro® achieved 96% clinical success in pneumonia, bronchitis, and bronchiectasis^{1*}—even in patients who:

- smoke, drink
- have underlying conditions, such as COPD
- are elderly or immunocompromised
- live in nursing homes
- have a history of repeated antibiotic use that has proven ineffective

*Achieves 96% favorable clinical response (resolution + improvement) of infections due to susceptible strains of indicated pathogens. See indicated organisms in prescribing information.

†In vitro activity does not necessarily imply a correlation with in vivo results.

NOTE: Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

CIPRO® SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN.

See next page for brief summary of prescribing information.

Cipro® TABLETS
(ciprofloxacin HCl)

The most potent fluoroquinolone. ^{2,4†}

Cipro[®] TABLETS

(ciprofloxacin HCl)

CIPRO[®] TABLETS (ciprofloxacin HCl)

BRIEF SUMMARY

CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

INDICATIONS AND USAGE

Cipro[®] is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

Lower Respiratory Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*, and *Streptococcus pneumoniae*.

Skin and Skin Structure Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Proteus vulgaris*, *Providencia stuartii*, *Morganella morganii*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Streptococcus pyogenes*.

Bone and Joint Infections caused by *Enterobacter cloacae*, *Serratia marcescens*, and *Pseudomonas aeruginosa*.

Urinary Tract Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia marcescens*, *Proteus mirabilis*, *Providencia rettgeri*, *Morganella morganii*, *Citrobacter diversus*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Streptococcus faecalis*.

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni*, *Shigella flexneri*, * and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General: As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Anaphylactic reactions following the first dose have been reported in patients receiving therapy with quinolones. Some reactions were accompanied by cardiovascular collapse, loss of consciousness, tingling, pharyngeal or facial edema, dyspnea, urticaria, and itching. Only a few patients had a history of hypersensitivity reaction. Anaphylactic reactions may require epinephrine and other emergency measures. Ciprofloxacin should be discontinued at the first sign of hypersensitivity or allergy.

Severe hypersensitivity reactions characterized by rash, fever, eosinophilia, jaundice, and hepatic necrosis with fatal outcome have been reported rarely (less than one per million prescriptions) in patients receiving ciprofloxacin along with other drugs. The possibility that these reactions were related to ciprofloxacin cannot be excluded. Ciprofloxacin should be discontinued at the first appearance of a skin rash or any sign of other hypersensitivity reaction.

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION). Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded.

Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION).

As with any potent drug, periodic assessment of organ system functions, including renal, hepatic, and hematopoietic function, is advisable during prolonged therapy.

Drug Interactions: As with other quinolones, concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Quinolones, including ciprofloxacin, have also been shown to interfere with the metabolism of caffeine. This may lead to reduced clearance of caffeine and a prolongation of its plasma half-life.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Concomitant administration of the nonsteroidal anti-inflammatory drug fenbufen with a quinolone has been reported to increase the risk of CNS stimulation and convulsive seizures.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients: Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum.

Patients should be advised that ciprofloxacin may be associated with hypersensitivity reactions, even following a single dose, and to discontinue the drug at the first sign of a skin rash or other allergic reaction.

Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Patients should be advised that ciprofloxacin may increase the effects of theophylline and caffeine.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Eight in vitro mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella: Microsome Test (Negative)
- E. coli DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V₇₉ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- Saccharomyces cerevisiae Point Mutation Assay (Negative)
- Saccharomyces cerevisiae Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the results of the following three in vivo test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in rats and mice have been completed. After daily oral dosing for up to 2 years, there is no evidence that ciprofloxacin had any carcinogenic or tumorigenic effects in these species.

Pregnancy—Pregnancy Category C: Reproduction studies have been performed in rats and mice at doses up to 6 times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity

IN LOWER RESPIRATORY INFECTIONS CIPRO[®] MAKES A TOUGH THERAPEUTIC CHOICE EASIER.

was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers: It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Patients under the age of 18 were not included in the clinical trials of ciprofloxacin because ciprofloxacin as well as other quinolones causes arthropathy in immature animals. Ciprofloxacin should not be used in children or adolescents (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%). Those events typical of quinolones are italicized.

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below.

GASTROINTESTINAL (See above): painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM (See above): dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.

SKIN HYPERSENSITIVITY (See above): pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands, cutaneous candidiasis, hyperpigmentation, erythema nodosum.

Allergic reactions ranging from urticaria to anaphylactic reactions have been reported (SEE PRECAUTIONS).

SPECIAL SENSES blurred vision, disturbed vision (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, limbus, hearing loss, bad taste.

MUSCULOSKELETAL joint or back pain, joint stiffness, achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL interstitial nephritis, nephritis, renal failure, polyuria, urinary retention, urethral bleeding, vaginitis, acidosi.

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY epistaxis, laryngeal or pulmonary edema, hiccup, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of the adverse events reported were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Other adverse events reported in the postmarketing phase include anaphylactic reactions, Stevens-Johnson syndrome, exfoliative dermatitis, toxic epidermal necrolysis, hepatic necrosis, postural hypotension, possible exacerbation of myasthenia gravis, confusion, dysphasia, myasthenia, pseudomembranous colitis, dyspepsia, flatulence, and constipation. Also reported were agranulocytosis, elevation of serum triglycerides, serum cholesterol, blood glucose, serum potassium, prolongation of prothrombin time, albuminuria, candiduria, vaginal candidiasis, and renal calculi (SEE PRECAUTIONS).

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic—Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Cholestatic jaundice has been reported.

Hematologic—Eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal—Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gamma-glutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. Only a small amount of ciprofloxacin (<10%) is removed from the body after hemodialysis or peritoneal dialysis.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Lower respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro[®] (ciprofloxacin HCl) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE DESCRIPTION).

References: 1. Data on file, Miles Inc. Pharmaceutical Division. 2. Barry AL, Jones RN, Thornberry C, et al. Antibiogram activities of ciprofloxacin, norfloxacin, oxolinic acid, cinoxacin, and nalidixic acid. *Antimicrob Agents Chemother* 1984;25:633-637. 3. Guimaraes MA, Noone P. The comparative in-vitro activity of norfloxacin, ciprofloxacin, enoxacin and nalidixic acid against 423 strains of gram-negative rods and staphylococci isolated from infected hospitalised patients. *J Antimicrob Chemother* 1986;17:63-67. 4. Van Caekenberghe DL, Pattyn SR. In vitro activity of ciprofloxacin compared with those of other new fluorinated piperazine-substituted quinolone derivatives. *Antimicrob Agents Chemother* 1984;25:518-521.

For further information, contact the Miles Information Service:
1-800-642-4776. In VA, call collect: 703-391-7888.

COMMITTED TO THERAPEUTIC EFFICIENCY

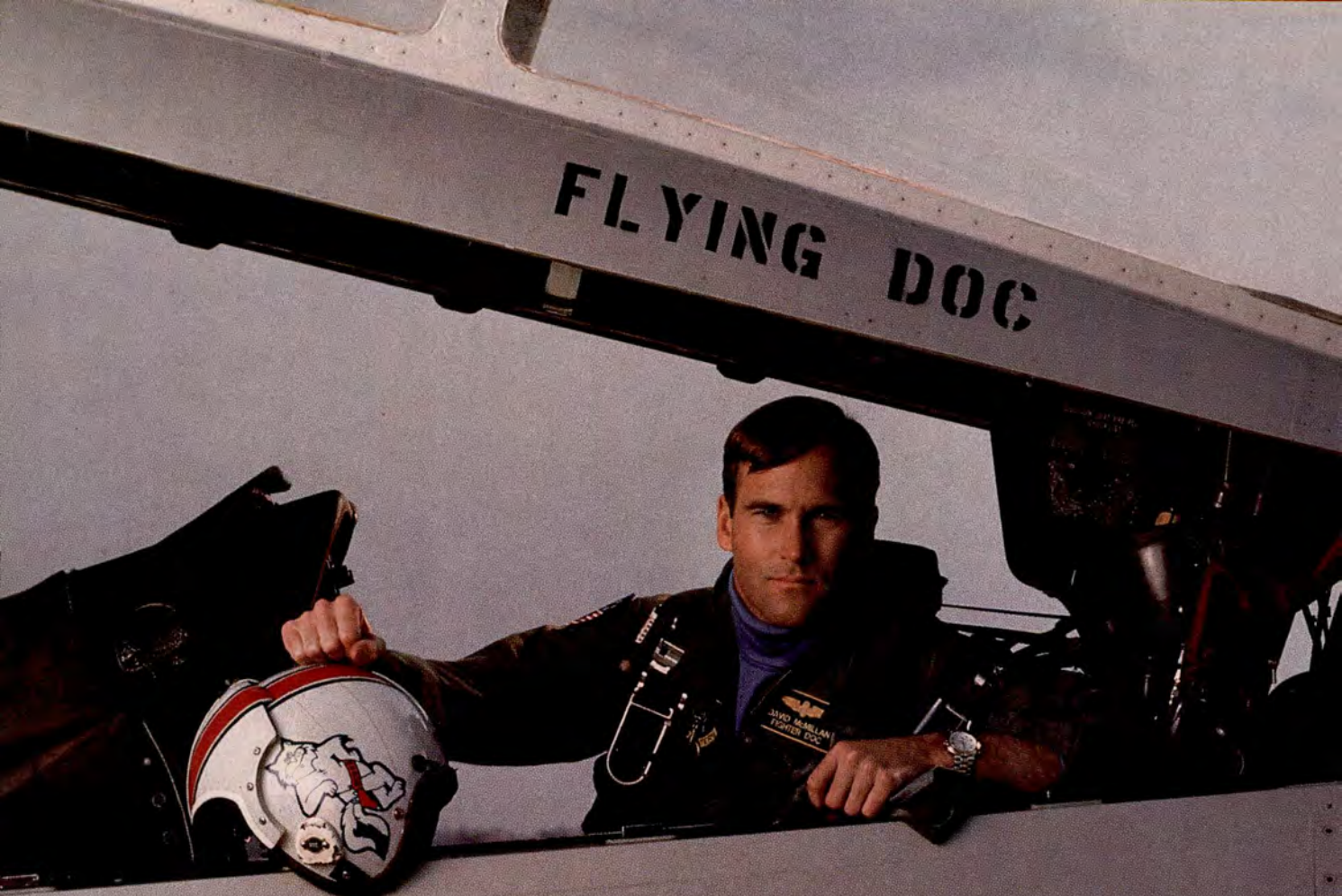


© October 1990, Miles Inc., Pharmaceutical Division

C09280

Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

MIL-6172



LARGE MEDICAL PRACTICE AVAILABLE. FLYING LESSONS INCLUDED.

Not every doctor gets around at over twice the speed of sound. But if you qualify to be a Flight Surgeon, that's the kind of excitement that awaits you as a Navy Physician.

Other qualified physicians can operate out of Europe, the Caribbean or the Orient. Still others can study fields seldom found in civilian practice, like undersea medicine.

All Navy Physicians enjoy an attractive benefits

package: No overhead, mal-practice protection, 30 days paid vacation and more. Most important, though, is the pride and respect that comes from wearing a Navy Officer uniform.

Talk to a Navy Medical Programs Officer today. Or call 1-800-327-NAVY. Then get ready to make your move. Because in today's Navy, you only go one way: Full speed ahead.



Being a Navy physician gives you the opportunity to travel around the world with your family.



Navy physicians are stationed in some of the finest medical facilities in the world.

NAVY
YOU AND THE NAVY.
FULL SPEED AHEAD.

HOW TO DESTROY AN WITHOUT ENDANGER



ENTIRE POPULATION ING THIS SPECIES.



For years, the most effective treatment for scabies infestations has also been potentially toxic to children.

Until now.

Elimite™ Cream is the first and only available scabicide with a 5% permethrin formulation that works safely and effectively.*

Studies involving over 520 patients concluded that Elimite Cream offers highly effective efficacy after one application, with infestation cure rates in excess of 90%.^{1,2}

Elimite Cream was also highly successful in resistant cases where Kwell® (lindane) 1% Cream had failed.^{3,4,5}

More importantly, it works without the potential threat of CNS toxicity which may be associated with lindane overexposure.^{1,6}

You can assure parents that Elimite Cream has been safely evaluated on infants as young as two months old.^{7,8} Elimite Cream offers a convenient, one-time application that is odorless and doesn't stain.

To top it off, Elimite Cream spreads on like a lotion, and washes out of the scalp as easily as shampoo.

For effective treatment from head to toe, prescribe Elimite Cream.

Call Herbert Laboratories at 1-800-347-4500 for more information today.

And begin eliminating the potential danger of eliminating scabies.

ELIMITE™

(permethrin) 5% Cream

Available in a 60 g tube

*Itching, mild burning and/or stinging may occur after application of Elimite Cream.



Herbert Laboratories

Herbert Laboratories, A Division of Allergan, Inc., Irvine, CA 92713

© 1991 Allergan, Inc.

Kwell® is a registered trademark of Reed & Carnrick.

See next page for brief prescribing information and references.

ELIMITE™ Cream (permethrin) 5%

INDICATIONS AND USAGE: Elimite (permethrin) 5% Cream is indicated for the single-application treatment of infestation with *Sarcoptes scabiei* (scabies). **CONTRAINDICATIONS:** Elimite is contraindicated in patients with known hypersensitivity to any of its components, to any synthetic pyrethroid, or pyrethrin. **WARNINGS:** If hypersensitivity to Elimite occurs, discontinue use. **PRECAUTIONS: General:** Scabies infestation is often accompanied by pruritus, edema and erythema. Treatment with Elimite may temporarily exacerbate these conditions. **Information for patients:** Patients with scabies should be advised that itching, mild burning and/or stinging may occur after application of Elimite. In clinical trials approximately 75% of patients treated with Elimite who continued to manifest pruritus at 2 weeks had cessation by 4 weeks. If irritation persists, they should consult their physician. Elimite may be very mildly irritating to the eyes. Patients should be advised to avoid contact with eyes during application and to flush with water immediately if Elimite gets in the eyes. **Carcinogenesis, mutagenesis, impairment of fertility:** Six carcinogenicity bioassays were evaluated with permethrin, three each in rats and mice. No tumorigenicity was seen in the rat studies. However, species-specific increases in pulmonary adenomas, a common benign tumor of mice of high spontaneous background incidence, were seen in the three mouse studies. In one of these studies there was an increased incidence of pulmonary alveolar-cell carcinomas and benign liver adenomas only in female mice when permethrin was given in their food at a concentration of 5000 ppm. Mutagenicity assays, which give useful correlative data for interpreting results from carcinogenicity bioassays in rodents, were negative. Permethrin showed no evidence of mutagenic potential in a battery of *in vitro* and *in vivo* genetic toxicity studies. Permethrin did not have any adverse effect on reproductive function at a dose of 180 mg/kg/day orally in a three-generation rat study. **Pregnancy: teratogenic effects:** Pregnancy Category B: Reproduction studies have been performed in mice, rats, and rabbits (200 to 400 mg/kg/day orally) and have revealed no evidence of impaired fertility or harm to the fetus due to permethrin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. **Nursing mothers:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the evidence for tumorigenic potential of permethrin in animal studies, consideration should be given to discontinuing nursing temporarily or withholding the drug while the mother is nursing. **Pediatric use:** Elimite is safe and effective in children two months of age and older. Safety and effectiveness in children less than two months of age have not been established. **ADVERSE REACTIONS:** In clinical trials, generally mild and transient burning and stinging followed application with Elimite in 10% of patients and was associated with the severity of infestation. Pruritus was reported in 7% of patients at various times post-application. Erythema, numbness, tingling, and rash were reported in 1 to 2% or less of patients (see PRECAUTIONS: General). **OVERDOSAGE:** No instance of accidental ingestion of Elimite has been reported. If ingested, gastric lavage and general supportive measures should be employed. **DOSAGE AND ADMINISTRATION:** Adults and children: Thoroughly massage Elimite into the skin from the head to the soles of the feet. Scabies rarely infests the scalp of adults, although the hairline, neck, temple, and forehead may be infested in infants and geriatric patients. Usually 30 grams is sufficient for an average adult. The cream should be removed by washing (shower or bath) after 8 to 14 hours. Infants should be treated on the scalp, temple and forehead. **ONE APPLICATION IS CURATIVE.** Patients may experience persistent pruritus after treatment. This is rarely a sign of treatment failure and is not an indication for retreatment.

Manufactured for
Herbert Laboratories
A Division of Allergan, Inc.
Irvine, CA 92713, U.S.A.
by Burroughs Wellcome Co.
Research Triangle Park, NC 27709



Herbert Laboratories

Herbert Laboratories
A Division of Allergan, Inc.
Irvine, CA 92713
©1991 Allergan, Inc.

References: 1. Schultz M. Comparative study of 5% permethrin cream and 1% lindane lotion for the treatment of scabies. *Arch Dermatol* 1990 Feb;126:167-170.
2. Taplin D, Meinking TL. Scabies, lice and fungal infections. *Primary Care* 1989 Sept;16(3):555.
3. Taplin D *et al*. Permethrin 5% dermal cream: A new treatment for scabies. *J Am Acad Dermatol* 1986 Nov; 15:995-1001.
4. Yonkosky D *et al*. Scabies in nursing homes: an eradication program with permethrin 5% cream. *J Am Acad Dermatol* 1990;23(6):1133-1136.
5. Taplin D, Meinking TL. Pyrethrins and pyrethroids in dermatology. *Arch Derm* 1990 Feb;126:213-221.
6. Davies JE, Dedhia HV, Morgade C *et al*. Lindane poisonings. *Arch Dermatol* 1983;119:142-144.
7. Taplin D *et al*. Comparison of crotamiton 10% cream (Eurax) and permethrin 5% cream (Elimite) for the treatment of scabies in children. *Pediatric Dermatol* 1990; 7(1):67-73.
8. Taplin D, Meinking TL. Infestations. In: Schachner LA and Hansen RC, eds. *Pediatric Dermatology*. Vol 2. New York, Edinburgh, London, Melbourne, Churchill Livingstone:1988;1465-1515.



Guilt by Association

Collective action by independently practicing
physicians can violate U.S. antitrust laws unless
physicians proceed very cautiously.

Case in point:

At a recent medical society meeting, during the discussion of a proposed HMO agreement, several doctors said that they would not participate in the plan unless the payor increased reimbursement. If a substantial number of physicians later declined to participate in the HMO, the medical society and its members could be sued, and a jury could find them guilty of a group boycott in violation of U.S. antitrust laws.

This may be the most important book you'll ever read:

Collective Negotiation and Antitrust

A Guide for Physicians

The American Medical Association, Office of the General Counsel, has published this book to help you avoid antitrust pitfalls and improve your ability to bargain effectively with payors.

To Order, Call Today: 1-800-621-8335

Price: \$5.00 (AMA Members)
\$7.50 (Non-members)



American Medical Association

Expanding Medicare and Employer Plans to Achieve Universal Health Insurance

Karen Davis, PhD

This article presents a proposal for expanding Medicare and employer-based health insurance plans to achieve universal health insurance. Under this proposed health care financing system, employers would provide basic health insurance coverage to workers and dependents, or pay a payroll tax contribution toward the cost of their coverage under Medicare. States would have the option of buying all Medicaid beneficiaries and other poor individuals into Medicare by paying the Medicare premiums and cost sharing. Other uninsured individuals would be automatically covered by Medicare. Employer plans would incorporate Medicare's provider payment methods. This proposal would result in incremental federal governmental outlays on the order of \$25 billion annually. These new federal budgetary costs would be met through a combination of premiums, employer payroll tax, income tax, and general tax revenues. The principal advantage of this plan is that it draws on the strengths of the current system while simplifying the benefit and provider payment structure and instituting innovations to promote efficiency.

(*JAMA*. 1991;265:2525-2528)

THE UNITED STATES has a mixed public-private system of financing health care. In 1988, of 244 million Americans, 13% were covered by Medicare, 6% by Medicaid, 57% by employer health plans, 9% by individual insurance or other sources, and 15% were uninsured.¹ This patchwork approach to health insurance coverage, while it serves some Americans well, contributes to a complex, costly health care system. The United States spends 12% of its gross national product on health care—far more than any other industri-

alized nation. Of greatest concern, an estimated 37 million uninsured people are vulnerable to receiving inadequate health care in the event of illness or injury and are exposed to the risk of severe financial hardship from health care bills.^{2,4}

This article presents a plan to cover the entire US population by building on the two strongest elements of the current system—employer-provided health insurance and the Medicare program, which currently covers elderly and disabled persons—while instituting a new universal provider payment system to control rising costs. This plan would achieve greater efficiency and simplicity by establishing a common basic benefit package under both Medicare and employer plans, and

establishing common provider payment methods applicable to both Medicare and employer plans. It would be financed through a combination of employer and individual premium contributions, payroll taxes, personal income taxes, and other general tax revenues.

RATIONALE

The strongest elements of the current US health financing system are the Medicare program and health insurance provided through large employer-based plans. Both are popular with beneficiaries and have a proven record of administrative efficiency with a low ratio of administrative expenses to benefits. Medicare has adopted new methods of paying hospitals and physicians that provide incentives for provider efficiency, simplify administration for both the program and providers, improve the equity of payment among providers, and give the federal government an enhanced ability to moderate the historical rates of spending growth.^{5,6} Many large employer plans have been innovative in the establishment of incentives for employees to join lower-cost health maintenance organizations and other managed care plans.⁶

The Medicaid program is an important source of health financing for the poor and has been instrumental in improving access to health care for many of the nation's poor.⁷⁻⁹ It is the only significant source of financing for long-term care—with over 40% of Medicaid expenditures devoted to nursing home care. However, the program has a num-

From the Department of Health Policy and Management, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, Md.
Reprints not available.

ber of limitations. Medicaid provider payment rates are clearly substandard. The program is administratively complex, causing many eligible people to fail to participate.

The most unsatisfactory sources of insurance coverage are individual insurance plans and small group insurance. Such plans have high administrative costs, charge high premiums, exclude individuals who are major health risks, and exclude coverage for preexisting conditions.^{9,10}

Building on the strongest parts of the current US health financing system would have several advantages. With an existing administrative structure, expanded coverage could be implemented relatively quickly with minimal disruption of current coverage. Further, by building on current programs rather than replacing them, current revenue sources would be maintained. Any new taxes or other revenues could be targeted for care of the uninsured, rather than, for example, requiring major tax increases to replace existing private coverage.

BASIC STRUCTURE

All employers would be required to provide basic health insurance coverage to full-time and part-time workers and dependents, or pay a payroll tax contribution toward the cost of their coverage under Medicare. Required employer financial obligations under either private insurance or Medicare would be limited to 6% of workers' wages. This would expand coverage to two thirds of the uninsured who are members of working families. States would be given the option of buying all current Medicaid beneficiaries and others below the poverty income level into Medicare, shifting most of the cost of basic hospital and physician benefits to the federal government. The remaining uninsured would be covered under Medicare, and would be assessed an income-related premium through the income tax system.

Benefits

The current Medicare benefit package would be expanded to include preventive care for pregnant women and children, in addition to the current benefit package of hospital services, physician services, limited home care and nursing home care, limited mental health services, and limited adult preventive services. The cost-sharing structure of Medicare would be revised to include a maximum \$250 per person, or \$500 per family deductible—rather than separate deductibles for hospital and physician services. A coinsurance of

20% would apply to all services other than hospital care. Cost sharing would be limited to \$1500 for an individual, or \$3000 for a family annually.

Employer Responsibilities

Employers would be required to contribute toward the health insurance coverage of full-time and part-time (defined as at least 10 hours per week) workers and dependents. Since all employers would be subject to this requirement, working spouses would be covered under their own employer's plan.

Employer coverage under private plans would be required to cover benefits at least as comprehensive as the Medicare benefit package. Employers could choose to provide benefits beyond this benefit package, without penalty to employers or workers.

Employers would be required to contribute at least 6% of employee earnings on average toward private plan coverage, not to exceed the cost of the basic benefit plan. Employees would be responsible for the remainder of the premium, but could negotiate with employers to cover a higher percentage. Alternatively, employers could meet this obligation by paying a 6% payroll tax to Medicare, resulting in coverage of workers and dependents under Medicare. Families bought into coverage under Medicare by employers would also contribute 2% of their family income toward coverage. Contributions to health coverage under either private plans or Medicare for low-income families would be offset by an increase in the earned income tax credit to ensure that such coverage would be affordable for low-wage workers.

State Medicaid Plans

States would be given the option of buying all Medicaid beneficiaries and other individuals below the federal poverty income level into Medicare. Currently, states are required to buy Medicare coverage for all elderly and disabled Medicare beneficiaries with incomes below the federal poverty level, and recent legislation will require Medicaid programs to pay the Medicare premiums for those with incomes up to 120% of the federal poverty level. In addition, under recent legislation states will be required to provide Medicaid coverage to all children up to age 18 years in families with incomes below the federal poverty level.

Under the proposal, states would be given the option of enrolling all Medicaid beneficiaries in Medicare. However, states electing this option would be required to extend this option to all uninsured poor adults as well as children.

States would be responsible for sharing with the federal government the cost of the Medicare Part B premium (currently \$32 monthly), deductibles, and coinsurance on covered services. The effect of this provision is to shift most of the cost of hospital and physician services for Medicaid beneficiaries to the federal government, and nearly all states could be expected to do so. In addition, states could elect to supplement the Medicare benefit package, covering prescription drugs, dental care, and other optional services with full state funding.

The federal government would continue to share in the cost of long-term care services for Medicaid beneficiaries according to the current federal-state matching rate. Reform of long-term care financing is also an important issue for the national health policy agenda, but is not addressed herein. It adds significantly to the cost of any health insurance reform proposal, and is, in my view, best addressed separately on its own merits.

The Medicare provider payment rates for hospitals, physicians, and other providers would apply to services provided to low-income beneficiaries bought into Medicare coverage by the states. Physicians would not be permitted to charge low-income beneficiaries fees in excess of the Medicare allowable fees.

Remaining Uninsured

An estimated 5 to 8 million nonpoor individuals would remain uninsured after expansion of employer coverage to all working families and Medicaid buy-in to Medicare of all poor individuals. Some of these individuals are early retirees who do not have retiree health benefits; some are disabled individuals who have not met the 2-year waiting period for Medicare coverage.¹¹

All remaining uninsured individuals would be automatically covered under Medicare. They would be assessed a tax equal to 2% of their income, prorated over the year for any portion of the year during which the individual was not covered by private insurance. This would guarantee that all individuals who fail to be covered under an employer plan, an individual health insurance plan, or a state Medicare buy-in plan would be protected from the risk of financial catastrophe in the event of a serious illness or injury.

Medicare Beneficiaries

Medicare beneficiaries would experience some changes under the plan. The cost-sharing structure would be modified to include a single deductible of \$250 per person for all services, rather than

separate hospital and physician deductibles. A ceiling on out-of-pocket expenses of \$1500 per person would be established. On average, beneficiary cost-sharing burdens could be expected to decline, especially for those who have catastrophic illnesses or injuries.

Financing

The current Medicare Trust Funds would be replaced with two new trust funds: the Medicare Elderly and Disabled Beneficiaries Trust Fund and the Medicare Employed Families and Individuals Trust Fund. Current Medicare beneficiaries services would be financed by revenue flows into the Medicare Elderly and Disabled Beneficiaries Trust Fund. Newly covered Medicare beneficiaries, including those bought in by employer contributions and by state Medicaid plans, would be covered under the Medicare Employed Families and Individuals Trust Fund.

The current financing of care for the elderly and disabled would be modified somewhat. Payroll tax contributions of 1.45% of earnings up to \$125 000 for employers and employees would continue to be assessed and would flow into the Medicare Elderly and Disabled Beneficiaries Trust Fund. The current Medicare Part B flat premium would be replaced by a premium set at 2% of family income, not to exceed the full actuarial value of Medicare. Revenues from this income-related premium would be approximately equal to current Part B premium receipts, although the distribution of the financial burden of the premium would clearly be shifted to higher-income Medicare beneficiaries. The premium would be collected through the income tax system, and forgiven for anyone with no net tax liability.¹² The premium would no longer be voluntary, but required of all Medicare beneficiaries. General tax revenues would continue to subsidize care for elderly and disabled beneficiaries, at a rate equivalent to the current general tax revenue contribution to Part B of Medicare.

Financing of the Medicare Employed Families and Individuals Trust Fund would be based on the 6% of payroll contributions by employers and 2% of income contributions of families and individuals newly covered under Medicare. States would contribute the state share of Medicare Part B premiums and cost sharing for Medicaid and other poor beneficiaries based on the current state matching rate under Medicaid. Federal general tax revenues would be used to provide any additional subsidies required to cover the remaining cost of employed families and nonworking individuals.

Provider Payment and System Reform

Employer plans would incorporate Medicare's provider payment methods. Specifically, physicians would be paid according to the Medicare Fee Schedule for all services, and a maximum limit on balance billing would be set on all services similar to that in the Medicare program. Employers electing to pay the balance bills for workers and dependents would be permitted to do so.

The Medicare Fee Schedule would result in lower physician payments than is currently the case in some private employer plans. Physicians would receive higher payments for Medicaid and uninsured patients. This would provide greater equity to physicians who currently provide a disproportionate share of care to low-income patients, and expand availability of care to such patients.

The Medicare Volume Performance Standard that now establishes a target for growth in expenditures for physician services under Medicare would be modified to include employer plans. This economic incentive to control unnecessary growth in the volume of services would be supplemented by the development of appropriateness guidelines and expanded research on effectiveness of medical procedures and treatment.

Hospitals would be paid a flat rate for the care of inpatients covered under employer plans based on the diagnosis related group prospective payment system. Hospitals would not be permitted to charge patients over and above the allowed rate. Again, while Medicare rates are lower than in some employer plans, bad debts for care of the uninsured and low payments by Medicaid would be eliminated under the plan.

Beneficiaries enrolled in both Medicare and employer plans would be given the option of enrolling in health maintenance organizations or other managed care plans. Employers would be permitted to pay a higher percentage of the premium, reduce cost sharing, or otherwise provide financial incentives to workers and dependents to enroll in more cost-effective managed care plans. However, the current practice by which larger employers obtain favorable price discounts through preferred provider organizations would no longer be permitted. Instead preferred provider organizations would be required to compete on the basis of the effectiveness of their utilization review and other managed care techniques.

COST

While careful cost analysis would be required to estimate the fiscal impact of

the proposal, a rough estimate can be obtained by drawing on the work of the Pepper Commission.¹³ The benefits and coverage of the proposal are quite similar to the Pepper proposal, although the sources of financing, cost-containment methods including universal provider payment, role of private insurance, and administrative mechanisms differ. Like the Pepper plan, it can be expected that the incremental federal governmental outlays will be on the order of \$25 billion annually (my estimate). These costs would be somewhat lower given the expansions of Medicaid that have occurred since the cost of the Pepper proposal was estimated. The cost-containment mechanisms set forth may also result in lower costs over time.

The new federal budgetary costs would be met through a combination of employer payroll tax contributions set at 6% of earnings for those newly covered under Medicare and individual contributions set at 2% of earnings for those covered under Medicare. Any remaining revenues could be met either through a 2% income tax surcharge on all tax-paying households or the establishment of a new upper income tax bracket of 38%.

COMMENT

The principal advantage of the plan is that it is a feasible approach that draws on the strengths of the current system while simplifying the benefit and provider payment structure and instituting innovations to promote efficiency. It minimizes the need for additional federal outlays, spreads the financial burden of health spending more equitably among employers and states, and makes health insurance more affordable to small businesses, self-employed, and nonworking individuals.

The plan achieves greater equity within the health care system by reducing the fiscal burden of hospitals, physicians, and primary care centers providing charity care to the uninsured and contributes to their financial survival. It protects all Americans from the financial hardship of health care bills, and it helps get all children off to a healthy start in life through comprehensive coverage of maternal and infant health care.

It builds on the existing administrative system for employer-provided health insurance and Medicare and, most important, realizes savings from lower administrative costs of these plans.

The combination of a universal provider payment system, coupled with expenditure constraints and incentives for managed care, should greatly improve

the ability of government and employers to constrain rising health care costs. It preserves pluralism in the health system, while permitting effective cost containment through a unified payer approach to setting physician and hospital payment rates similar to those of other industrialized nations.

This approach has a minimal disruptive economic impact and is likely to have a negligible impact on employment in small firms, with some expansion of jobs in the health sector. Its design minimizes any inflationary impact on the health sector, while making American products more competitive in international markets through effective cost controls and more equitable sharing of costs among employers.

The plan differs from the plan advanced by the Pepper Commission¹³ and other mixed public-private plans in that it does not stress reform of the private health insurance market—such as requiring community-rating, prohibiting the exclusion of preexisting conditions, or establishing risk-sharing pools. While these measures are commendable and perhaps worthy of trial, they are working against the economic incentives insurers have to avoid bad risks and are likely to be circumvented through imaginative marketing practices.

Rather, the proposal gives all employers and nonworking individuals the option of coverage under Medicare, with its administrative efficiency and strong cost-containment provisions. This should provide an incentive to private insurers to offer plans with good benefits at competitive premiums to

avoid loss of enrollees to Medicare. However, it can be expected that the Medicare alternative will be relatively more attractive to low-wage employers, groups with greater than average health risk, and small firms that do not wish to search for a less costly private plan.

The tendency of low-wage employers to seek Medicare coverage, however, can be viewed as an advantage. It should help increase the stability of coverage of low-income individuals as they gain employment and leave welfare. Their coverage under state purchase of Medicare will continue as employer purchase of Medicare.

The option of purchasing Medicare should also reduce the extent of variation in experience-rated premiums among employer private insurance plans, by permitting high-risk groups to choose Medicare coverage. Dumping individuals identified as poor risks on Medicare should be mitigated by the requirement that an employer make an all-or-nothing decision to cover employees under Medicare. Persons deemed bad risks could not be singled out for public plan coverage. Medicare coverage, however, could be expected to be attractive to early retirees with health problems who do not have employer retiree health benefits or who cannot purchase private insurance individually at an attractive premium. Medicare becomes, in effect, the mechanism for pooling the cost of many high-risk persons, with necessary subsidies provided by general tax revenues.

The United States cannot afford to continue on its present course with a

costly health system that subjects many of its most vulnerable citizens to inadequate health care. It is hoped that this article will contribute to shaping a consensus for change.

References

1. *Overview of Entitlement Programs: 1990 Green Book*. Washington, DC: US House of Representatives, Committee on Ways and Means; 1990.
2. Davis K. Availability of medical care and its financing. In: Rogers DE, ed. *Doctoring America*. Baltimore, Md: The Johns Hopkins School of Medicine; 1990.
3. Freeman HE, Blendon RJ, Aiken L, Sudman S, Mullimix C, Corey C. Americans report on their access to health care. *Health Aff*. 1987;6:6-18.
4. Blendon RJ. What should be done about the uninsured poor? *JAMA*. 1988;260:3176-3177.
5. Ginsburg PB, LeRoy LB, Hammons GT. Medicare physician payment reform. *Health Aff*. 1990;9:178-188.
6. Davis K, Anderson GF, Rowland D, Steinberg EP. *Health Care Cost Containment*. Baltimore, Md: The Johns Hopkins Press; 1990.
7. Davis K, Rowland R. Financing health care for the poor: contribution of health services research. In: Eli Ginzberg, ed. *Health Services Research: Key to Health Policy*. Cambridge, Mass: Harvard University Press; 1991:93-125.
8. Rogers DE, Blendon RJ, Moloney TW. Who needs Medicaid? *N Engl J Med*. 1982;307:13-18.
9. Davis K. *National Health Insurance: Benefits, Costs, and Consequences*. Washington, DC: The Brookings Institution; 1975.
10. Davis K. National health insurance: a proposal. *Am Econ Rev*. 1989;79:349-352.
11. Davis K. Uninsured older adults: the need for a Medicare buy-in option. In: *Health Insurance Options: Expanding Coverage Under Medicare and Other Public Health Insurance Programs*. Washington, DC: US House of Representatives, Committee on Ways and Means; 1990.
12. Davis K, Rowland D. *Medicare Policy: New Directions for Health and Long-term Care*. Baltimore, Md: The Johns Hopkins Press; 1986.
13. US Bipartisan Commission on Comprehensive Health Care. *A Call for Action*. Washington, DC: The Pepper Commission on Comprehensive Health Care; 1990.

A Framework for Reform of the US Health Care Financing and Provision System

The Kansas Employer Coalition on Health, Task Force on Long-term Solutions

REPRESENTING 100 businesses, insurers, providers and other employers throughout Kansas, the Kansas Employer Coalition on Health, Inc is the state's primary voice for employers in matters of health policy.

In 1987 the coalition's board resolved to supply private sector leadership to solve the problem of large numbers of uninsured Americans. When an internal committee presented a universal access model, the board returned it to the committee with instructions to include provisions for cost containment. In July 1989 the board endorsed the principles and general strategies of the framework that follows.

BACKGROUND

The present methods of funding and providing health care throughout most of the United States (including Kansas) have allowed or contributed to the emergence of several serious problems:

- Health care costs have increased at an alarming rate throughout the 1980s, far outstripping the overall inflation rate and doubling approximately every 6 years (*Washington Post*, January 8, 1989).

- As many as 500 000 Kansans¹ (21%) and over 30 million Americans² are without any medical insurance. Besides causing delayed and neglected access to needed care, such lack of coverage leads to uncompensated services by providers and an undesirable level of cost shifting to paying patients.

- Morbidity and mortality statistics for the United States are unenviable compared with those of other developed countries, despite this country's leading

role in health care spending.

Health care observers generally concede that market forces of the 1980s have failed to deal successfully and permanently with the problems of cost, access, and quality.

Agreement grew within the coalition that the problems of cost, access, and quality are interrelated. Further, it became apparent that nothing less than a comprehensive restructuring of the system is required to solve the problems. Simply expanding the current system and amplifying present cost-containment techniques would likely prove inadequate.

Finding no acceptable blueprint for reform among domestic proposals or foreign systems, the coalition has created a mosaic of principles and recommendations.

PRINCIPLES

- Each citizen or citizen's family has a responsibility to secure financial protection against major health care costs and should participate in a comprehensive plan of health insurance.

- Each citizen has a responsibility, means permitting, to share in the cost of his or her insurance plan.

- Each citizen has a responsibility, means permitting, to share in the cost of every episode of medical care.

- Because health care is fundamental to the productivity, independence, and well-being of the citizenry, the public has a responsibility to ensure that basic health care is available to its members, regardless of economic status.

- The insurance system should spread the risks for medical expenses across the widest practical base, thus ensuring that no individual or group bears a disproportionate exposure.

- Proposals for system reform should build on current structures to a maximum extent consistent with

achieving control of costs, access, and quality.

- Proposals for system reform should minimize reliance on regulatory controls, consistent with goals for costs, access, and quality.

RECOMMENDATIONS AND RATIONALE

1. Establish a system in which each citizen or citizen's family not eligible for Medicare, subscribes either to his or her employer's health plan or, by default, to a publicly sponsored plan.

The American public perceives health care as fundamental to the productivity, independence, and well-being of the citizenry. It follows that, to secure such a basic good, the public bears a responsibility to ensure access to a reasonable level of health care for all citizens, regardless of economic status. Those who minimize the responsibility of society to individuals in this regard still tend to concede the value to society of providing basic medical treatment to all individuals in order to prevent expensive emergency care.

For these reasons, a key tenet of this framework is to enroll each citizen in a broad plan of health insurance coverage. Each individual or family would be expected to show evidence of health insurance (perhaps an accompanying tax return). Failure to do so would trigger a special tax to help support a publicly sponsored plan, in which that person would be enrolled by default.

Individuals and dependents who have access to a qualifying employer-sponsored plan would be required by law to enroll in such a plan.

In order to apply cost containment (discussed below) across a broad range of medical services, the coverage must have corresponding breadth. Failing to make the coverage broad simply invites continued escalation of costs for uncov-

From the Kansas Employer Coalition on Health, Inc, Topeka, Kan. Members of the Kansas Employer Coalition on Health, Task Force on Long-term Solutions are listed at the end of the article.

Reprint requests to the Kansas Employer Coalition on Health, Inc, 1271 Harrison, Topeka, KS 66612 (James P. Schwartz, Jr.).

ered services.

Thus, it is recommended that the minimum breadth of coverage be similar to that of the HMO Act of 1973 (section 1122 of the Social Security Act) or Medicare.

One may well question the appropriateness and utility of having employers sponsor health plans. From a practical standpoint, however, an evolutionary approach to achieving universal coverage seems advisable, building on existing employer-insurance relationships. Thus, it is recommended that employers have an option either to provide coverage or to pay a tax to help support a publicly sponsored plan.

Individuals would be required to help support their plan participation through either premium sharing (in the case of employer-sponsored plans) or taxation (in the case of the publicly sponsored plan).

Currently, many uninsured individuals could afford to pay some fraction of the cost of insurance. Instead, under the present system, their large medical expenses must be shifted to the insured population. Thus, by requiring individual participation (means permitting) in the cost of insurance, costs would be spread more equitably among those who are able to bear them. Moreover, a requirement for individual premium sharing would make patients more cognizant of costs and, presumably, wiser purchasers of care.

Detailed funding schemes that satisfy these requirements have been articulated by the National Leadership Commission on Health Care,³ Enthoven and Kronick,⁴ and the Pepper Commission.⁵

The operation of the publicly sponsored plan could be contracted to private insurance carriers or to private fiscal intermediaries for administrative services. Failing successful private management, the plan could be administered directly by the government. In any case, state Medicaid programs could be folded into the public plan.

Taxes on individuals for the publicly sponsored plan would reflect income (and perhaps asset) level, probably with some realistic cap on taxable amount.

In all likelihood, existing forces will maintain a strong commitment by employers to providing health care coverage. Those forces include the need to attract labor by offering a contribution to insurance premiums, as well as tax deductibility of those contributions. In addition, employers would be free to offer private, supplemental insurance for conditions not covered in the basic plan.

2. Establish a mechanism by which the state (or the federal government)

determines a single maximum annual percentage of premium increase (or taxation increase in the case of the publicly sponsored plan) for all health insurance plans.

The concept of a budget is fundamental to health care cost containment.⁶ An expeditious way to achieve a budget without inviting the government to assign roles and apportion resources is to require the state or federal government to determine a single maximum annual percentage of premium increase (or taxation increase in the case of the publicly sponsored plan) for all health insurance plans.

The federal government would determine the rate by a formula closely tracking the consumer price index. The reason for not limiting the increases strictly to the consumer price index is that some latitude may be needed to fund general medical research and research on protocols (see recommendation 3), to fund improved technology, and to reflect changes in the injury and illness patterns of society.

A separate pool made up of all insurance carriers could be created to fund widespread catastrophes or unpredictable epidemics. This pool, similar to current "guarantee funds," would also protect against insolvency on the part of individual insurers.

This requirement for limiting increases in insurance rates establishes, in essence, a budget for the system. Experience has taught that, when the health care system is constrained in a particular direction, it tends to bulge out in another direction. Thus, by establishing a budget for the entire system, expansion of the system may be controlled.

The effect of limiting rate increases would be to place insurers at risk for increasing costs. Thus, insurers would have a powerful incentive to control costs. A natural reaction by insurers would be to form tightly integrated managed-care alliances with providers in order to share the financial risk with those providers. Insurers and their provider allies would have a strong incentive to apply careful cost-benefit judgments to such matters as capital expansion, preference among treatment locations and modalities, length of confinement, and selection of materials and subcontractors. Providers who failed to help the plan stay within budget would be less attractive to plan sponsors.

Incentives for insurers to profit by downgrading quality of care would be offset by public dissemination of quality comparisons among providers (see recommendation 3) and by competition for

market share between the networks.

Most likely, such rate regulation would force a consolidation of the health insurance industry from hundreds to a small number that can develop the capability to manage costs. Indeed, insurers may eventually become the financing and marketing arms of the health care provision system.

Implementing this requirement on a national scale would preclude insurers from boycotting individual states. The challenge to insurers would thus be to find an efficient niche within a consolidated market. Failing that, the likely alternative would be a highly regulated single-payer system.

It might be argued that if insurers are unable or unwilling to manage the degree of risk associated with these recommendations, it may be time for business, government, or both to decide that such third parties are obsolete.

Given a fair chance, rate regulation may be expected to reduce the administrative overhead associated with the present, fragmented system. In addition, this strategy creates incentives to apply provider compensation methods that reward cost-effective behavior. For example, fee-for-service plans would likely give way to plans that pay providers by salary, per patient, or per case. Where fees are paid, fee schedules and expenditure targets would be employed.

A politically attractive aspect of this strategy is that it encourages desirable economic changes simply by limiting the amount of funds available for care. The market will then attend to realignment, without need for sweeping government intervention.

3. Quality of health care services will be ensured through government monitoring and establishment of publicly sponsored research on medical protocols.

When cost containment is discussed, providers often warn of the possibility that quality will suffer. To guard against deteriorating quality, it is recommended that the government monitor the quality of medical services and make reports available to the public. In addition, a portion of the taxes on employers, insurers, and individuals should be earmarked for research on medical protocols. The reason for this last item is the wide variation in practice styles, unsupported by evidence of differing effectiveness or outcomes.⁷ Research on protocols would help clarify some of the "gray areas" in medicine and raise some of the art to the level of science.

4. Reestablish community rating as a basis for determining premiums.

The health insurance industry began with the concept that costs should be spread among many people, so that no individual would risk financial devastation from health care expenses. Early insurance plans charged the same rate for all groups within a given community. This practice became known as *community rating*.

Eventually some groups discovered that through good fortune their members were unusually healthy and so needed less care than those of other groups. They found insurance carriers who would rate them according to their exceptionally low-cost experience. Having lost these low-cost members, the remaining plans quickly found their costs per beneficiary much higher and so needed to raise premiums.

This trend of splitting the healthy from the unhealthy has continued until the cost of insurance for some less healthy groups has become unaffordable. Even seemingly innocuous practices such as rating groups by age and sex may effectively shift costs toward the most needy. The offering of multiple options within groups has further aggravated this situation. Worse yet, some groups have resorted to questionable practices like excluding seriously ill members from the plan to keep costs in line.

If one accepts the premise that the public has a responsibility to ensure its members a reasonable level of care, regardless of economic status, then it follows that systemic reform must restore the practice of well people shouldering the financial burden imposed on the ill and aged. Experience rating, by contrast, tends to shift costs to the ill, injured, and aging—often the people least able to cope with such demands.

Thus, it is recommended that insurers be required to adopt community rating, meaning a single set of rates based only on dependent status and the broadest practical geographic basis.

In order to maintain incentives for promoting healthy life-styles among plan members, allowance would be made for rate adjustment by life-style characteristics, eg, not smoking, use of safety belts, and maintenance of safe blood pressure. Determining the proper extent of these adjustments will require further analysis.

To fully realize the system-wide benefits of community rating, the ability of individual companies to splinter off from the community and pay only for preferred risks would have to be minimized. Thus, it is contemplated that self-insured plans might best be gradually phased out. This sacrifice on the part of self-insured firms is intended to

be offset by savings from the cost-containment scheme in recommendation 2.

5. Adopt a policy that all health care plans must, within capacity limits, accept any applying employer group or association of employer groups.

Some groups presently encounter an extreme form of experience rating—not by premium levels, but by exclusion at any price. There is currently much financial pressure on insurers to skim the healthiest risks from the available population. Thus, it is commonplace for insurers to refuse to write coverage for groups with high claims histories or to cancel groups that develop such records. The effect of such practices is to segregate the ill from the healthy, which benefits the able at the expense of the unfortunate. For the same reasons presented for recommendation 4, it is recommended that insurers be required to accept any employer-based group (or association of employer groups) that applies.

6. Adopt a policy that each patient or patient's family, means permitting, shall pay some fee for every episode of care, up to an established out-of-pocket maximum.

It is generally agreed that efforts to contain the overall costs of health care must address demand by individuals. The first RAND Corporation study⁸ showed that medical services perceived as "free" tend to be utilized at a greater rate than those that bear some cost to the recipient. Thus, it is recommended that each patient, means permitting, pay some fraction of the cost of each episode of care. An annual limit could be placed on the amount of this expense.

7. Establish ancillary activities by the federal government.

To provide a context for reform, the government should provide leadership to develop health care policy on a national, regional, and state level.

Since prevention is the best medicine and education is the key to prevention, the government should provide improved health education services to the public.

Because of the requirement in this framework for every citizen to carry coverage, some entity (probably the government) must establish a minimum level of benefits that meets the intent of the law.

The proposed approach is expected to provide strong incentives for providers to participate. If, however, lack of participation becomes a problem, then some regulation may be contemplated to require reimbursement through plan sponsors.

Because of the pressures for medical inflation caused by malpractice litigation,

it is recommended that the government take strong measures to reform the tort system in a more cost-conscious direction.

Because the recommended provisions are, compared with other reform strategies, friendly to existing arrangements, the government should inform the public that, if the approach fails, it will implement a single-payer system.

CONCLUSIONS

Our recommendations are intended to constitute a politically moderate approach, with roles and trade-offs for all current participants. Competitive forces are supported by leaving the primary funding and provision systems in the private sector and by establishing an overall budget. Regulation is invoked to bring about universality of coverage, explicit containment of costs, and preservation of quality.

Although these elements are certainly amenable to modification, they are deemed by the authors to be hung in fair and delicate balance. Modifications will necessarily alter the balance of trade-offs and the likelihood of acceptance by various groups. Likewise, the recommendations are presented not as a sundry assortment of "quick fixes," but rather as a cohesive structure with value greater than the sum of its parts.

Members of the Kansas Employer Coalition on Health, Task Force on Long-term Solutions are as follows: James P. Schwartz, Jr, Consulting Director, Kansas Employer Coalition on Health, Inc, Topeka, Kan; Melissa Levy Hungerford, Kansas Hospital Association, Topeka, Kan; John Knack, Blue Cross/Blue Shield of Kansas, Topeka, Kan; Thomas M. Palace, Savings League Services Inc, Topeka, Kan; Thomas Plumberg, Hill's Pet Products, Topeka, Kan; Walter D. Rogers, Family Health Plan, Newton, Kan; James Slover, RN, Healthcheck, Inc, Topeka, Kan.

References

1. Kansas Commission on Access to Services for the Medically Indigent and Homeless. *Report and Recommendations on Access to Services for the Medically Indigent and Homeless*. Topeka, Kan: Kansas Dept of Legislative Research; 1989:4.
2. Moyer ME. A revised look at the number of uninsured Americans. *Health Aff*. 1989;8(2):102-110.
3. National Leadership Commission on Health Care. *For the Health of a Nation*. Ann Arbor, Mich: Health Administration Press; 1989.
4. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s. *N Engl J Med*. 1989; 320:29-37.
5. US Bipartisan Commission on Comprehensive Health Care. *A Call for Action*. Washington, DC: The Pepper Commission on Comprehensive Health Care; 1990.
6. Brown LD, McLaughlin C. Constraining costs at the community level. *Health Aff*. 1990;9:5-28.
7. Wennberg J, Gittelsohn A. Variations in medical care among small areas. *Sci Am*. 1982;246:120-133.
8. Duan N, Keeler EB, Leibowitz A, Marquis MS. Health insurance and the demand for medical care: evidence from a randomized experiment. *Am Econ Rev*. 1987;77:251-277.

Universal Health Insurance Through Incentives Reform

Alain C. Enthoven, PhD, Richard Kronick, PhD

Roughly 35 million Americans have no health care coverage. Health care expenditures are out of control. The problems of access and cost are inextricably related. Important correctable causes include cost-unconscious demand, a system not organized for quality and economy, market failure, and public funds not distributed equitably or effectively to motivate widespread coverage. We propose Public Sponsor agencies to offer subsidized coverage to those otherwise uninsured, mandated employer-provided health insurance, premium contributions from all employers and employees, a limit on tax-free employer contributions to employee health insurance, and "managed competition." Our proposed new government revenues equal proposed new outlays. We believe our proposal will work because efficient managed care does exist and can provide satisfactory care for a cost far below that of the traditional fee-for-service third-party payment system. Presented with an opportunity to make an economically responsible choice, people choose value for money; the dynamic created by these individual choices will give providers strong incentives to render high-quality, economical care. We believe that providers will respond to these incentives.

(JAMA. 1991;265:2532-2536)

THE PARADOX OF EXCESS AND DEPRIVATION

AMERICAN national health expenditures are now about 13% of the gross national product, up from 9.1% in 1980, and they are projected to reach 15% by 2000, far more than in any other country.¹⁻³ These expenditures are straining public finances at all levels of government. At the same time, roughly 35 million Americans have no health care coverage at all, public or private, and the number appears to be rising.^{4,7} Millions more have inadequate insurance that leaves them vulnerable to large expenses, that excludes care of preexist-

ing conditions, or that may be lost if they become seriously ill. The American health care financing and delivery system is becoming increasingly unsatisfactory and cannot be sustained. Comprehensive reform is urgently needed.

DIAGNOSIS

The etiology of this worsening paradox is extremely complex; many factors enter in. Some factors we would not change if we could (eg, advancing medical technology, people living longer). We emphasize factors that are important and correctable.

First, our health care financing and delivery system contains more incentives to spend than to not spend. It is based on *cost-unconscious demand*. Key decision makers have little or no incentive to seek value for money in health care purchases. The dominant open-ended fee-for-service (FFS) sys-

tem pays providers more for doing more, whether or not more is appropriate. ("Open ended" means that no budget is set in advance within which the job must be done.) Once insured, consumers are not cost conscious. Deductibles and coinsurance at the point of service have little or no effect on most spending, which is on sick people who have exceeded their out-of-pocket spending limits. "Free choice of provider insurance" blocks cost consciousness on the demand side by depriving the insurer of bargaining power. This approach is rapidly yielding in the marketplace to preferred provider insurance. In its present forms, preferred provider insurance helps to regulate price but is not yet very effective in controlling the volume of services. Medicare, Medicaid, and the subsidies to employer-provided health care coverage built into the income and payroll tax laws are all open ended and encourage decisions in favor of more costly care. These incentives are reinforced by a medical culture that esteems use of the most advanced technology, high patient expectations, and the threat of malpractice litigation if these expectations are not met.

Contrary to a widespread impression, America has not yet tried *competition* of alternative health care financing and delivery plans, using the term in the normal economic sense, ie, *price competition* to serve cost-conscious purchasers. When there is price competition, the purchaser who chooses the more expensive product pays the full difference in price and is thus motivated to seek value for money. However, in offering health care coverage to employees, most employers provide a larger subsidy to the FFS system than to health maintenance organizations (HMOs), thereby destroying the incentive for

From the Graduate School of Business, Stanford (Calif) University (Dr Enthoven); and the Department of Community and Family Medicine, University of California, San Diego (Dr Kronick).

Reprint requests to Graduate School of Business, Stanford University, Stanford, CA 94305 (Dr Enthoven).

consumers and providers to choose the economical alternative. Many employers offer no choice but FFS coverage.^{8,9} Others offer choices but pay the whole premium, whichever choice the employee makes. In such a case, the HMO has no incentive to hold down its premium; it is better off to charge more and use the money to improve service. In many other cases, employers offer a choice of plan, but the employer pays 80% or 90% of the premium or all but some fixed amount, whichever plan the employee chooses. In all these cases, the effect is that the employer pays more on behalf of the more costly system and deprives the efficient alternatives of the opportunity to attract more customers by cutting cost and price.

The rational policy from an economic point of view would be for employers to structure health plan offerings to employees so that those who choose the less costly plans get to keep the full savings. Several factors discourage them from doing this. Employers became committed to paying the price of the FFS plan in the 1960s and 1970s, when costs were much lower and HMOs were few. Now this commitment is hard to break. When an employment group considers more costly and less costly health plans, it knows that government will pay about one third of the extra cost of the more costly plan through tax remission. Labor unions see management commitment to full payment of costs of the open-ended system as a precious bargaining prize. There is a need for collective action. If one employer attempts to convert to cost-conscious employee choice while other employers remain with the employer-pay-all system, the employer will get disgruntled employees in the short run but no reformed, cost-effective health care system in the long run. For the latter to happen, most employers in a geographic area must convert to cost-conscious choice.

The second major problem is that our present health care financing and delivery system is not organized for quality and economy. One of the main drives in the present system is for each specialist to exercise his or her specialty, not to produce desired outcomes at reasonable cost. In a system designed for quality and economy, managed care organizations would attract the responsible participation of physicians who would understand that, ultimately, their patients bear the costs of care, and they would accept the need for an economical practice style. Data would be gathered on outcomes, treatments, and resource use, and providers would base clinical decisions on such data. We have few

outcome data today. The FFS system often pays more to poor performers who have high rates of complications than to good performers who solve patients' medical problems quickly and economically. High-quality performers are not rewarded, because of the payment system and because employers and consumers do not have the data to identify them.

There are too many beds and too many specialists in relation to the number of primary care physicians. A high-quality cost-effective system would carefully match the numbers and types of physicians retained and other resources to the needs of the population served so that each specialist and subspecialist would be busy seeing just the type of patient she or he was trained to treat. We have a proliferation of costly specialized services that are underutilized. For example, in 1986, more than one third of the hospitals in California doing open-heart surgery performed fewer than 150 operations, the minimum annual volume recommended by the American College of Surgeons (*Los Angeles Times*, December 27, 1988:3).

The third major problem area is "market failure." The market for health insurance does not naturally produce results that are fair or efficient. It is plagued by problems of biased risk selection, market segmentation, inadequate information, "free riders," and the like.¹⁰ Insurers profit most by avoiding coverage of those who need it most. The insurance market for small employment groups is breaking down as small employers find insurance unavailable or unaffordable, especially if a group member has a costly medical condition. Most employment groups are too small for risk spreading or economical purchase of health insurance. Systematic action by large collective purchasers is needed to manage competition to reward providers of high-quality economical care and to make affordable coverage available to individuals and small groups.

Fourth, public funds are not distributed equitably or effectively to motivate widespread coverage. The unlimited exclusion of employer health benefit contributions from the taxable incomes of employees is the second-largest federal government health care "expenditure," trailing only expenditures for the Medicare program. While providing incentives for the well-covered well-to-do to choose even more generous coverage, this provision does little or nothing for those (mainly lower-income) people without employer-provided coverage. Most of the \$46 billion the federal budget lost to this tax break in 1990 went to households with above-

average incomes, many of whom would have bought at least catastrophic expense protection without the tax subsidy, while little went to households with below-average incomes, people whose decisions to insure could be substantially affected by such subsidies. The system works backwards: the most powerful incentives to insure go to those in the highest income tax brackets. From a tax effectiveness point of view, it should be the reverse. Government-provided subsidies should give everyone strong incentives to purchase coverage and to choose economically.

In brief, powerful *incentives* that shape behavior in the health care system and that influence the distribution of services point the system in the wrong direction: services too costly for those who are covered, and the exclusion of millions from any coverage at all.

OUR PROPOSAL

We propose a set of public policies and institutions designed to give everyone access to a subsidized but responsible choice of efficient, managed care (HMO, preferred provider insurance plans, etc).^{11,12} We propose *comprehensive reform of the economic incentives* that drive the system. We propose cost-conscious informed consumer and employer (or other sponsor) choice of managed care so that plans competing to serve such purchasers will have strong incentives to give value for money. We also propose a strategy of *managed competition* to be executed by large employers and public sponsors (explained below), designed to reward with more subscribers those health care financing and delivery plans that offer high-quality care at relatively low cost. The goal of these policies would be the gradual transformation of the health care financing and delivery system, through voluntary private action, into an array of managed care plans, each competing to attract providers and subscribers by finding ways to improve the quality of care and service while cutting costs. We propose restructuring the tax subsidies to create incentives to cover the uninsured and to encourage the insured to be cost conscious in their choice of plan. We propose the creation of public institutions to broker and market subsidized coverage for all who do not obtain it through large employers. We favor substantial public investments in outcomes and effectiveness research to improve the information base for medical practice and consumer/employer choice.

Public Sponsor Agencies

The Public Sponsor, a quasi-public agency (like the Federal Reserve) in

each state, would contract with a number of private-sector health care financing and delivery plans typical of those offered to the employed population and would offer subsidized enrollment to all those who do not have employment-based coverage. Except in the case of the poor, the Public Sponsor would contribute a fixed amount equal to 80% of the cost of the average plan that just meets federal standards. The enrollee would pay the rest. (The 80% level was chosen to balance two incentives. First, we wanted the subsidy level to be low enough so that there would be room for efficient plans to compete by lowering prices and taking subscribers away from inefficient plans. Second, we wanted the subsidy to be high enough so that the purchase of health insurance would appear very attractive even to those who expect to have no medical expenses.) To the enrollee, the Public Sponsor would look like the employee benefits office.

In the case of the poor, we propose additional subsidies. People at or below the poverty line would be able to choose any health plan with a premium at or below the average and have it fully paid. For people with incomes between 100% and 150% of the poverty line, we propose public sharing of the premium contribution on a sliding scale related to income.

Public Sponsors would also act as collective purchasing agents for small employers who wished to take advantage of economies of scale and of the ability of Public Sponsors to spread and manage risk. Small employers could obtain coverage for their groups by payment of a maximum of 8% of their payroll.

Today, a substantial part of the money required to pay for care of the uninsured comes from more or less broadly based state and local sources, including employers' payments to private hospitals for bad debt or free care and direct appropriations from state and local governments to acute-care hospitals. In our proposal, federal funds (the sources of which are described below) would be the main source of support for the Public Sponsors. These funds would be supplemented by funds from state and local sources.

Mandated Employer-Provided Health Insurance

For better or worse, we have an employment-based system of health insurance for most people under age 65 years. It can be modified gradually but not replaced overnight. Most employers and employees agree that health care will be included in the compensation package. This is responsible behavior; if

one of the group gets sick, the group pays the cost. Some employers and employees do not include health care in the package. The effect is irresponsible behavior; if an employee becomes seriously ill, these employers and employees count on someone else to pay. They are taking a "free ride." It is hard to justify raising taxes on the insured to pay for coverage for the employed uninsured unless those uninsured are required to contribute their fair share.

The existence of Public Sponsors would give all employers access to large-scale efficient health care coverage arrangements. However, in the absence of corrective action, the availability of subsidized coverage for uninsured individuals would create an incentive for employers to drop coverage of their employees. This would create additional expense for the Public Sponsor without compensating revenue. To prevent this, our proposal requires employers to cover their full-time employees (employers would make a defined contribution equal to 80% of the cost of an average plan meeting federal standards and would offer a choice of health plans meeting federal standards).

Premium Contributions From All Employers and Employees

Many people who are self-employed, who have part-time or seasonal work, or who are retired and under age 65 years do not have enough attachment to one employer to justify requiring the employer to provide coverage. Thus, an employer mandate for full-time employees would leave out millions of people. Moreover, in the absence of corrective action, a requirement that employers cover full-time employees creates a powerful incentive to use part-time employees.

We propose that employers be required to pay an 8% payroll tax on the first \$22 500 of the wages and salaries of part-time and seasonal employees, unless the employer covered the employee with a health insurance plan meeting federal standards. Self-employed persons, early retirees, and everyone else not covered through employment would be required to contribute through the income tax system. An 8% tax would apply to adjusted gross income up to an income ceiling related to the size of the household. The ceiling would be calculated to ensure that households with sufficient income paid for approximately the total subsidy that would be made available to them through the Public Sponsor.

The proceeds of these taxes would be paid by the federal government to the states, on a per-person-covered basis,

for use by Public Sponsors in offering subsidized coverage to persons without employment-based coverage.

This tax would be at the federal level because individual states might be deterred from levying such a tax by employer threats to move to a state without the tax.

Limit on Tax-Free Employer Contributions

We propose that Congress change the income and payroll tax laws to limit the tax-free employer contribution to 80% of the average price of a comprehensive plan meeting federal standards. The average price of a qualified health plan in 1991 might be roughly \$290 per family per month. As a condition of tax exemption, employer health plans would be required to use fixed-dollar defined contributions, independent of employee choice of plan, not to exceed the limit, so that people who choose more costly health care plans must do so with their own money, not with that of the taxpayer or employer.

The purposes of this measure are twofold. First, it would save the federal budget some \$11.2 billion in 1988 dollars. This money could be used to help finance subsidies for the uninsured comparable to those received by the employed insured. Second, making people cost conscious would help enlist all employed Americans in a search for value for money in health care, would stimulate the development of cost-effective care, and would create a market for cost-effective managed care. Thus, this tax reform is defensible on grounds of both equity and efficiency.

Budget Neutrality

The Congressional Budget Office has estimated the effects of our proposal on coverage, costs, and the federal budget and has found that our proposed new revenues would equal the added outlays.¹³ We have not done a state-by-state analysis, but, in the aggregate, required state and local contributions appear to approximately equal outlays for care of the uninsured.

Managed Competition

The market for health insurance does not naturally produce results that are fair or efficient. It is plagued by problems of biased risk selection, market segmentation, inadequate information, etc. In fact, the market for health insurance cannot work at the individual level. To counteract these problems, large employers and Public Sponsors must structure and manage the demand side of this market.¹⁴ They must act as intelligent, active, collective purchasing

agents and manage a process of informed cost-conscious consumer choice of "managed care" plans to reward providers of high-quality economical care. Tools of effectively managed competition include the annual open-enrollment process; full employee consciousness of premium differences; a standardized benefit package within each sponsored group; risk-adjusted sponsor contributions, so that a plan that attracts predictably sicker people is compensated; monitoring disenrollments; surveillance; ongoing quality measurement; and improved consumer information.

Outcomes Management and Effectiveness Research

As Ellwood¹⁴ and Roper et al¹⁵ have pointed out, there is a poverty of relevant data linking outcomes, treatments, and resource use. Although such data are costly to gather, they constitute a public good, and their production ought to be publicly mandated and supported. Combined with the incentives built into our proposal, such data could be of great value to providers and patients seeking more effective and less costly treatments. Without incentives for efficiency, such data are likely to have little impact on health care costs.

Mutually Supportive Components

Some components of our proposal have been proposed individually. However, they would be much more effective as parts of an integrated, comprehensive reform program than they would be alone. Consider, for example, a law that employers must cover their full-time employees. Alone, this law would leave out people who are not employed on a full-time basis and their dependents—12 million people. Without a payroll tax on uninsured employees, employers would have a strong incentive to escape the mandate by using part-time employees. Without Public Sponsors, the law would not address the problem of availability of affordable coverage for small employers. Without the limit on tax-free employer contributions, the law would not address the need for a cost-containment strategy.

We recognize the propensity of the American political system to seek minimal, incremental change. Some components of our proposal would be viable and helpful on their own. However, we believe that effective solution of the problems of access and cost requires a comprehensive strategy, and the merits of the combined package exceed the merits of the individual components.

WILL IT WORK?

Our confidence that a reasonably well-managed comprehensive reform

plan along these lines can be made to work rests on two propositions.

First, efficiently managed care does exist. It is possible to improve economic performance substantially over the non-selective FFS, solo practice, third-party intermediary model. The best documented example was a randomized comparison of per capita resource use between Group Health Cooperative of Puget Sound and traditional third-party insurance and FFS providers in Seattle, Wash, in the Health Insurance Experiment of the RAND Corp.¹⁶ Group Health Cooperative of Puget Sound cared for its assigned patients at a cost about 28% lower than that in the FFS sector, resulting in essentially equal health outcomes and overall patient satisfaction about 95% as high. Satisfaction with interpersonal aspects of care and technical quality was 98% as high as in the FFS sector.^{17,18} Group Health Cooperative of Puget Sound accomplished this without much cost-conscious demand and without any significant competing organized system. One wonders how much better they might have done if there had been several such organizations competing to serve cost-conscious consumers. Other nonrandomized studies have produced similar results.¹⁹

Many physicians and patients may prefer practice styles other than prepaid group practice. We do not have similar experimental evidence on the economic performance of independent practice associations and preferred provider insurance plans. However, we have observed wide variation in the performance of providers. For example, in Los Angeles, Calif, in 1986, one hospital performed 44 coronary artery bypass grafts with an 11.4% death rate and median charges of \$59 000, while another hospital performed 770 coronary artery bypass grafts with a 3.8% death rate and median charges of \$16 000 (*Los Angeles Times*, July 24, 1988:3). Some managed care plans would find ways of selecting economical providers of high quality and would channel business to them, improving quality and cutting costs substantially.

Second, people do choose value for money. Our limited experience with even attenuated price competition in employment groups such as federal employees, California state employees, and Stanford University suggests that, over time, people do migrate to cost-effective systems. A recent study of health plan choice in the Twin Cities, Minnesota, area found that employees' decisions are quite sensitive to health plan prices.^{20,21} This accords with generally accepted principles of economic behavior.

We have been asked, "Why, if non-profit HMOs are so much more efficient and desirable, have they failed to grow except very modestly?" In times past, legal and professional barriers were important, including illegal restraints of trade.²² In recent years, the main inhibitor of the growth of HMOs has been the employer contribution policies we have discussed; that is, most employers do not structure their health plan offerings in such a way that the employee who chooses the most economical plan gets to keep the savings. Nevertheless, some nonprofit HMOs have been growing rapidly; through the 1980s, Harvard Community Health Plan averaged membership growth of more than 11% per year, and the Kaiser-Permanente Medical Care Program averaged 5.2% growth on a much larger base. However, the success of our proposal does not depend only on nonprofit HMOs. Other forms of cost-effective managed care may do the job. What we propose is a restructured market system in which the efficient prosper and the inefficient must improve or fail.

COMPREHENSIVE REFORM THAT RELIES ON INCENTIVES IS PREFERABLE TO DIRECT GOVERNMENT CONTROLS

One alternative to the system we have proposed is a system like Canada's, in which the government is the sole payer for physician and hospital services. While Canada's system has evident strengths, there would be major difficulties in successfully adopting or implementing it in the United States. First, it would require a political sea change to adopt such a system here. A tax increase of approximately \$250 billion per year would be required, the intense opposition of insurers and many provider groups would need to be overcome, and the concerns of many employers and citizens about the effects of such a system on access and quality would need to be allayed. In the era in which the Berlin wall has been torn down, one must be cautious about branding any proposal as politically infeasible, but it is difficult to imagine a politician winning election on a platform including an extremely large tax increase. Second, government regulatory processes tend to freeze industries and often penalize efficiency. The Canadian system is not as frozen as it might be because proximity to the United States exposes Canadians to our innovations. If American medical care were also entirely financed and regulated by the government, the negative effects of regulation would likely loom larger.

A second alternative would be to

leave the financing of health insurance for the employed population in the private sector but to have the government regulate physician and hospital prices for all payers. It is possible to imagine a political compromise in which such a system could be adopted—in the midst of a recession, providers might agree to accept all payer price controls in exchange for an employer mandate, and employers might acquiesce to a mandate in exchange for price controls—but it is hard to imagine that such a regulatory structure could be effective over time in promoting quality or economy. Such price controls would be met by continuing provider efforts to circumvent and modify them. Providers would lobby for adjustments and exceptions deemed to enhance equity, increasing the complexity of the regulations and the incentives for those who were not favored to seek favor. Congress would have created a rich new barrel of pork to reward electoral supporters and contributors—an especially attractive source, because price increases for private sector rates could be granted without requiring a tax increase.

Furthermore, such a system does not contain incentives to shift medical care resources from less productive to more productive uses. The current mantra in

cost containment is the development of practice guidelines and the application of these guidelines to eliminate the ineffective practices that exist in our medical care system today. While we strongly support the development of better outcomes data and practice guidelines, in the absence of change in the financial incentives created by the FFS system, such guidelines will do little either to control costs or to lead to improvements in efficiency. For guideline development to succeed, medical care would have to be much more of a science and much less of an art than it is likely to be at any time in the foreseeable future.

Finally, administrative costs in the present system are high and increasing.²⁸ These costs arise from many causes: the multiplicity of payers, each with its own forms, processes, and data requirements; the high marketing costs associated with the coverage of individuals and small groups; the costs of determining eligibility for coverage in a system in which millions have no coverage; the costs of billing patients for covered services; the costs of payers attempting to determine whether services were actually provided and were appropriate; and others. We believe administrative costs would be greatly reduced under our proposal. After a competitive

shakedown, there would be relatively few managed care organizations in each geographic area. Everyone would get coverage through large group arrangements. Eligibility determination would be simple in a system of universal coverage. Today, the best managed care organizations do not bill patients for services. Providers are paid by health plans in simplified ways using prospective payments for global units of care. In a system with relatively few managed care organizations competing to serve competent sponsors and cost-conscious consumers, payers would not have to attempt to micromanage the delivery of care because providers would be at risk. Administrative costs and the "hassle factor" would be much lower than they are today. However, the most important economies would be in the effective organization of the process of care itself.

Over time, we would expect slowed growth in the price of the average health plan and continuing improvements in efficiency comparable to those in other competitive industries.

The authors gratefully acknowledge support from the Robert Wood Johnson Foundation, Princeton, NJ, and the Henry J. Kaiser Family Foundation, Menlo Park, Calif.

References

- Office of the Actuary, Health Care Financing Administration. National health expenditures, 1986-2000. *Health Care Financ Rev*. Summer 1987;8:1-36.
- Schieber GJ, Poullier JP. Recent trends in international health care spending. *Health Aff*. Fall 1987;6:105-112.
- 1991 US Industrial Outlook. Washington, DC: US Dept of Commerce; 1991.
- Kronick R. *The Slippery Slope of Health Care Finance: Business, Hospitals, and Health Care for the Poor in Massachusetts*. Rochester, NY: University of Rochester; 1990. Thesis.
- Wilensky GR. Filling the gaps in health insurance: impact on competition. *Health Aff*. Summer 1988;7:133-149.
- Ries P. Health care coverage by age, sex, race, and family income: United States, 1986. In: *Advance Data From Vital and Health Statistics of the National Center for Health Statistics: No. 139*. Hyattsville, Md: Public Health Service; 1987. US Dept of Health and Human Services publication PHS 87-1250.
- Health Insurance and the Uninsured: Background Data and Analysis*. Washington, DC: Congressional Research Service, Library of Congress; 1988.
- Jensen GA, Morrissey MA, Marcus JW. Cost sharing and the changing pattern of employer-sponsored health benefits. *Milbank Q*. 1987;65:521-542.
- Foster Higgins Health Care Benefits Survey. *Managed Care Plans*. New York, NY: Foster Higgins; 1989.
- Enthoven A. *Theory and Practice of Managed Competition in Health Care Finance*. Amsterdam, the Netherlands: Elsevier Science Publishers; 1988.
- Enthoven A, Kronick R. A consumer choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy, I. *N Engl J Med*. 1989;320:29-37.
- Enthoven A, Kronick R. A consumer choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy, II. *N Engl J Med*. 1989;320:94-101.
- Long S, Rodgers J. *Enthoven-Kronick Plan for Universal Health Insurance*. Washington, DC: Congressional Budget Office; 1988.
- Ellwood PM. Outcomes management: a technology of patient experience. *N Engl J Med*. 1988;318:1549-1556.
- Roper WL, Winkenwerder W, Hackbarth GM, Krakauer H. Effectiveness in health care. *N Engl J Med*. 1988;319:1197-1202.
- Manning WG, Leibowitz A, Goldberg GA, Rogers WH, Newhouse JP. A controlled trial of the effect of a prepaid group practice on use of services. *N Engl J Med*. 1984;310:1505-1510.
- Davies AR, Ware JE, Brook RH, Peterson JR, Newhouse JP. Consumer acceptance of prepaid and fee-for-service medical care: results from a randomized controlled trial. *Health Serv Res*. 1986;23:429-452.
- Sloss EM, Keeler EB, Brook RH, Operskalski BH, Goldberg GA, Newhouse JP. Effect of a health maintenance organization on physiologic health. *Ann Intern Med*. 1987;106:130-138.
- Luft HS. How do health-maintenance organizations achieve their 'savings?' rhetoric and evidence. *N Engl J Med*. 1978;298:1336-1343.
- Feldman R, Dowd B, Finch M, Cassou S. *Employee-Based Health Insurance*. Rockville, Md: National Center for Health Services Research; 1989. US Dept of Health and Human Services publication PHS 89-3434.
- Feldman R, Finch M, Dowd B, Cassou S. The demand for employment-based health insurance plans. *J Hum Res*. 1989;24:115-142.
- Weller CD. 'Free choice' as a restraint of trade in American health care delivery and insurance. *Iowa Law Rev*. 1984;69:1351-1392.
- Himmelstein DU, Woolhandler S. Cost without benefit: administrative waste in US health care. *N Engl J Med*. 1986;314:441-445.

An American Approach to Health System Reform

John Holahan, PhD; Marilyn Moon, PhD; W. Pete Welch, PhD; Stephen Zuckerman, PhD

THE MAJOR problems in the United States' health care system today are the large number of uninsured Americans, the high and rising costs of the system, and the system's administrative complexity. With over 32 million Americans lacking health insurance at any time and 63 million Americans lacking health insurance at some point during a recent 28-month period, the problem of being uninsured is faced by a large percentage of the population.¹⁻⁵ Despite this lack of coverage, the United States spends more on health care, per capita and as a percentage of gross national product (GNP), than any other country. In addition, we also have one of the highest rates of increase—over 4% per year after adjusting for inflation.^{6,7} Finally, it is estimated that the annual administrative expenses borne by insurance companies, physicians, hospitals, and other providers are about \$80 billion, or 1.5% of GNP.⁸ This does not include the administrative burdens faced by employers who must choose among plans and the efforts of individuals who must file claims.

Although most would agree that these are serious problems, there is no consensus on what should be done. Some look to the Canadian system as a model for reform.⁹ The Pepper Commission developed the most visible policy proposal that would build on existing American institutions.¹⁰ We use elements of both the Canadian system and the Pepper Commission proposal to design a reform option that would significantly expand insurance coverage and control costs with policies that are politically acceptable. This article is drawn from a report that presents a broad overview of reform issues and options.¹¹

THE CANADIAN SYSTEM

The Canadian system offers universal coverage to all citizens through public

sector insurance administered at the provincial level. Like the United States, Canada retains private sector provision of services. Unlike the United States, there is no cost-sharing and physicians are not generally permitted to bill in excess of the provincial fee schedules. The provinces constitute the single payer, with substantial monopsony power in negotiating budgets with hospitals and fee schedules for physicians. They also control the availability of new health technologies. The system is financed in part by federal contributions to the provinces. Before 1977, the federal contribution represented half of the cost of the system. Since then, the increase in the federal contribution has been tied to the growth in the Canadian GNP, causing it to drop to about 45% by the late 1980s. If provinces are unable to control the growth in costs, they will increasingly bear more of the burden of financing the system. This gives them strong incentives to control the growth in expenditures.

The Canadian system has a number of important strengths. No Canadian is without health insurance. There is equity across income groups. The poor are treated as well as the rich. In addition, the costs of the Canadian system are under control. Growth rates of the system's cost are approximately those of the GNP. And finally, the administrative costs of the system are low. It is estimated that the United States would save about \$30 billion, or 0.5% of GNP, if it had the administrative costs of the Canadian system.¹²

Although the Canadian system is attractive from many points of view, there are serious problems that make it unlikely to be adopted in the United States. First, taxes are higher than is politically feasible in the United States. It is estimated that the Canadian system would mean \$250 billion of new taxes.¹⁰ These are not new resources for the health care system; they would largely replace private insurance payments or individuals' out-of-pocket payments.

But they would be on-budget and highly visible. The second problem is that the US health insurance industry would be eliminated, or largely so. Insurance firms could continue to be agents to process claims, but they would no longer underwrite. Therefore, they would be likely to exercise strong political opposition to a Canadian-style system. The third problem is that the Canadian system is probably too egalitarian for the United States. The degree of equity in the Canadian system is probably not acceptable to Americans. The rich are not likely to want to be treated the same as the poor, again resulting in a group strongly opposed to this type of reform. Finally, there is no consensus on how to contain the cost of the system. Many Americans do not believe that a single-payer, rate-setting system is desirable or absolutely essential to efforts to control costs.

THE PEPPER COMMISSION PROPOSAL

The Pepper Commission's proposal of March 1990 went a long way toward providing a structure that could reform the US health care system. The Commission proposed that all employers with more than 100 employees provide health insurance or pay a payroll tax. Eventually all employers would be required to do so. If employers choose to pay the tax, this would enroll their employees in a federally administered public plan. The proposal included reform of the private insurance market that would eliminate experience rating and other practices that make it difficult for some employers to obtain coverage at reasonable costs. The Pepper Commission proposal would also eliminate Medicaid, putting those now served by Medicaid and those whose employers pay the payroll tax into a single public plan. The proposal would essentially leave Medicare as it is.

The major weakness is that the Pepper Commission provided for only limit-

From The Urban Institute, Washington, DC.
Reprint requests to Director, Health Policy Center,
The Urban Institute, 2100 M St NW, Washington, DC
20037 (Dr Holahan).

ed cost-containment efforts. Essentially, by covering the poor and near-poor at the federal level, Medicare policies for payment to hospitals and physicians would be expanded to apply to a broader segment of the population. While this is a step in the right direction, there are no cost-containment provisions that would affect the rest of the population. The Commission's decision not to back a single, clearly defined cost-containment strategy reflects fundamental disagreements over what policies will work and can be implemented in this country. However, proposals that do not consider cost containment ignore one of the driving forces for reform of health care in the United States today.

COST-CONTAINMENT APPROACHES

Although there is evidence that rate setting does contain costs in specific sectors (eg, hospitals and nursing homes), there are few, if any, American tests of broader cost-containment initiatives. Therefore, we believe that allowing for diversity in this area is essential.

Greater patient cost-sharing (either through deductibles or copayments) is often advocated by those who believe that the volume of services provided is excessive because Americans do not have to pay enough of the cost at the point of service. However, most other industrialized countries do not rely heavily on cost sharing as a mechanism for cost containment even though they have had uniformly better experience in controlling costs than the United States.

Others believe that cost containment requires government regulation of the provider side of the market. One regulatory approach is to subject all providers to the same rate-setting system, regardless of whether there is one payer or multiple payers. (West Germany has been an example of a system with multiple payers but a single set of rules.) Such a strategy generally relies on the government to control prices paid to hospitals, physicians, and other providers and to put volume limits on services. Regulation could also be used to control the rate of diffusion of technological innovations. The strength of this approach is that it introduces a *de facto* monopolist—the rate setter—to counterbalance health care providers, often viewed as having some monopoly power over health care decisions. However, if the regulator is highly effective at controlling the expansion of health care spending, new and potentially beneficial technologies may be introduced more slowly.

Some alternatives involve fostering more effective competition among providers. These approaches to lowering costs reflect Americans' preference for using choice and the marketplace instead of government intervention. One market approach to cost control is called "managed competition."¹⁸ Managed competition begins with caps on the tax deductibility of employer contributions to employee health insurance premiums to make consumers more sensitive to costs. It then seeks to control costs through competition among multiple, managed care arrangements, eg, health maintenance organizations, independent practice associations, and preferred provider organizations, with consumers able to choose those programs that offer the most for the money. The assumption is that such competition would lower costs to the point where traditional indemnity arrangements would no longer be competitive. The competition among the remaining managed care organizations would give the system control over provider payment rates and volume.

The negative side of competition arises when providers seek ways to screen out people who need expensive health care, thereby voiding the benefits of price competition. They may offer lower costs, but only by leaving the care of costly patients to others. A second problem is implicit in the belief that, given full information about plan quality and costs, consumers will opt for the low-cost alternative once the in-kind tax subsidies are reduced. There is little evidence to suggest how much consumers might be willing to pay to keep their current health insurance arrangements in place rather than pick the low-cost option. Yet, if most people select their present high-cost plans—because of perceived access and/or quality advantages—despite having to bear the costs directly, the lower-cost plans would not flourish.

AN AMERICAN APPROACH

Our proposal builds on many of the ideas proposed by the Pepper Commission as well as important elements of the Canadian system. Like the Pepper Commission, we propose that universal coverage be achieved through a combination of both private and public sector expansion. We would also require employers to provide health insurance or to pay a payroll tax. These revenues, as well as other subsidies, would be used to finance a public backup program to cover the remainder of the population. We would also propose similar reforms of the insurance industry.

Our proposal differs from the Pepper Commission's in that we would provide for more generous subsidies to the poor and near-poor. One result would be that more of the nonelderly population would be in the public plans. Our approach would also provide for stronger cost-containment incentives than does the Pepper Commission and would allow a range of approaches.

In the same way that the Canadian system relies on provinces for administration and to ultimately bear the risk of rapidly growing costs, we would rely on the states. As in Canada, federal contributions to the public plans would be tied to the growth in GNP. Our proposal differs from the Canadian system in that we would retain a large role for the private sector.

The first component of our proposal is that Medicare would be unchanged. Medicare is the major health insurance program for aged and disabled Social Security recipients; it is administered federally and has uniform national policies. The program is well established and highly popular. There is little to be gained from altering its structure. Medicare, however, does face major financial problems over the coming years. It will be necessary to continue to develop the cost-containment strategies that Medicare has already begun.

The second component is a pay or play scheme—requiring employers to either provide health insurance to their workers or pay a tax. All but extremely small firms would be required to participate in this system. The objective would be to cover all firms where administratively practical. One possibility would include all employers now paying the FICA (Federal Insurance Contributions Act) tax; this would then include employers with even one employee.

Employers would be required to provide health insurance meeting minimum standards in terms of benefits, with legislatively established maximum deductibles and coinsurance; employers would be required to pay at least 75% of the cost of this coverage. (ERISA [Employee Retirement Income Security Act] rules would have to be modified to ensure that these and other provisions of this plan apply to firms who choose to self-insure.) Employers could offer more generous plans, but the difference in actuarial value between the offered plan and the required benefits would be treated as taxable income. Employees would be required to purchase insurance for themselves and their families if it is offered by the employer; individuals with incomes below certain specified levels would have the costs of insurance subsidized by the state.

Most basic acute care services including cost-effective preventive services would be covered; prescription drugs would be excluded at least initially. Deductibles would be approximately \$200 per person and \$500 per family, with coinsurance of 20% up to catastrophic limits of approximately \$1500 per individual and \$3000 per family. Individuals and families below certain income levels could be exempt from cost sharing or have lower stop-loss limits.

Firms not wishing to provide such policies would be required to make a contribution approximately equal to the national average percentage of payroll now devoted to health insurance (about 7.0%) in the form of a tax on payroll. (Firms could choose to offer a private plan for full-time workers and to pay the tax for part-time workers but otherwise must choose one approach for all employees.) States would be required to use these payroll tax revenues to establish new backup public health insurance programs. These new programs would provide insurance for workers whose employers choose to pay the tax and would also replace Medicaid for persons not in the work force. The new public programs would provide coverage to all nonworking individuals and their families with incomes below poverty at no cost to the individual or the families. Individuals and families with incomes between 100% and 250% of the poverty line would be permitted to purchase this insurance on a sliding scale. Those with higher incomes could buy into the public plan at the full community-rated cost. Once affordable coverage is offered to all individuals, enrollment could be required so that everyone contributes to the cost of their health care.

The tax would be set (and, probably, adjusted over time) at a rate that would result in a large minority of employers choosing to pay it rather than provide private insurance. (The exact rate that would yield the desired mix of private- and public-plan enrollees would depend on the cost of the mandated plan and the distribution of payroll expenses across firms.) A relatively large public program, eg, containing about one third of the nonelderly, would ensure the establishment of payment rates and other policies that would result in a degree of access acceptable to voters, many of whom would also be program participants. We would prefer to rely on the political power that a sizable number of public-plan enrollees would provide to ensure that adequate minimum standards of quality and access are established. The alternative would be detailed federal rules and regulations for state-administered programs. If reli-

ance on the political process results in inadequate access for public-plan enrollees, some minimum standards for provider reimbursement and utilization control may be necessary. Our concern, however, is that overly rigid requirements will limit state flexibility in the design of cost-containment strategies.

Firms with relatively healthy, highly paid employees would probably choose to offer a private plan. Firms with large numbers of low-wage or part-time employees, or with disproportionate numbers of older workers or individuals in poor health, would probably choose to pay the tax. Because health care costs and, thus, private insurance premiums will be high (or low) in the same markets where payrolls tend to be high (or low), there should not be major geographic differences in incentives to choose the public plan.

The public program that replaces Medicaid would therefore cover three types of persons: (1) workers whose employers pay the tax, (2) the poor, and (3) workers and nonworkers who buy into the public plan. The program would be financed by the tax on employers, by limitations on the deductibility of employer health insurance contributions, by beneficiary contributions, and by federal and state subsidies.

This proposal has some important features in common with the Pepper Commission plan; thus, the cost estimates for the Pepper proposal (\$24 billion) offer some guidance as to the cost of our approach. Because our proposal would cover approximately 35% of the nonelderly population in the public plan, it would mean higher federal and state taxes beyond the payroll taxes (relative to the Pepper plan). The cost of subsidizing nonworkers and dependents below 250% of the poverty line (including the cost of increasing reimbursement rates for current Medicaid beneficiaries) and the cost of subsidizing workers whose employers choose to pay the tax would both be somewhat higher than in the Pepper Commission proposal. Offsetting these costs is the increase in federal (and possibly state) tax revenues from the limitations on deductibility of health insurance premiums (lower tax expenditures).

Estimation of these costs, as well as costs of all other "pay or play" proposals, including the Pepper Commission's, is complicated because of the lack of good data on the distribution of payroll expenses across firms. With regard to these cost estimates, however, two issues merit serious attention. First, much of the public cost is offset by expenses that would not be borne elsewhere in the system, eg, privately pur-

chased health insurance, out-of-pocket expenses, or uncompensated care. Second, the more important cost issue is the growth in health expenditures over time. The savings from gaining control over expenditure growth, as has happened in other industrialized nations, could swamp the additional first-year budget costs of our proposal.

STATES AND COST CONTAINMENT

An essential feature of our approach to controlling cost growth is that the annual percentage increase in the federal contribution to the states will be equal to the growth in nominal GNP, as in Canada. (Because the kinds of individuals who will shift into the public plan may incur more costs than expected as a result of unpredicted adverse selection, federal contributions may need to grow somewhat faster than GNP during an initial phase-in period.) The federal contribution would initially vary from 50% to 75% of the cost of subsidizing the public program, with the federal contribution varying inversely with state per capita income and directly with the number of persons in poverty. The federal government's contribution would be about 60% of the total cost, on average. The federal contribution could be financed by an earmarked tax such as a national sales tax or a payroll tax. Although it is not essential that the federal tax be earmarked, the federal contribution rate does need to increase in step with inflation and long-term real growth in the economy. It is also important that a mechanism be established to protect states from short-term declines in income during periods of economic downturn.

The effect of these provisions is that if increases in health care costs exceed the rate of growth in GNP, states would, by design, bear an increasingly large burden. The objective, in addition to sharing the burden of financing the system between both the federal and state governments, is to provide strong incentives for states to control costs. States could, of course, lobby to have the federal contribution rate increased.

States, therefore, would have a major role in our proposed scheme. They would gain a large influx of federal revenues that would finance much of the cost of covering the currently uninsured. In exchange, they would both administer the public plan and have major responsibilities for cost containment. Their success in developing strategies for cost containment would affect not only the cost of the public sector plan, and thus state tax contributions, but also the cost

of those who are insured privately in the state.

States would have the freedom to choose among a variety of strategies for cost containment. We have argued that this freedom is essential because there are fundamental disagreements on how the system's costs should be contained; much of the disagreement exists across regional lines. For example, states could choose to rely on managed competition, ie, allowing private insurance entities (eg, preferred provider organizations, health maintenance organizations) to compete to control costs. This could include permitting the public programs to buy individuals into private insurance arrangements or health maintenance organizations. Alternatively, states could choose to use some form of all-payer rate setting to control both price and volume of care. These regulations would be applied to both public- and private-sector plans. They could also choose to limit coverage to cost-effective procedures along lines that have recently been proposed in Oregon. States would also have Medicare policies available as a possible model. The key element is that states bear a measure of financial risk for failure.

The incentives for cost containment extend beyond the states' risk for excess growth in the costs of the care of public-plan enrollees. States have incentives to be concerned with the growth in costs of private plans as well. If private insurance premiums increase as a percentage of payroll, the number of enrollees in the public plan will grow, increasing the need for state (and federal) subsidies. In addition, the private insurance industry needs to control the growth in health care costs and thus premiums, because failure to do so will mean loss of market share and an increase in public-plan enrollment. Finally, because insurance reforms should limit risk-selection opportunities, cost control must come through controlling provider payments and increased administrative efficiency.

The increase in costs at the state level would be a relatively large financial burden for many of them. One way to alleviate this burden would be to federalize the long-term-care component of the Medicaid program. This would provide approximately \$14.5 billion of fiscal relief to states in 1990 dollars. (Although this is approximately the same amount as the increase in states' costs for the expansion of acute care, there would be gainers and losers among individual states. These may need to be addressed.) Long-term care is a large burden for states, and one that will grow substantially over time as the popula-

tion ages. Relieving states of this burden may make the added responsibilities for administering the acute care system significantly more acceptable. Federalizing long-term care would also facilitate the coordination of Medicare and Medicaid policies toward nursing homes and home health care.

SUMMARY

In terms of the major objectives one would have for health system reform, this plan makes the following choices:

1. It would cover everyone, through Medicare (the elderly), employer-based coverage (some workers and dependents), or a state-level public program that would replace Medicaid (the poor, unemployed, and other workers and dependents).

2. There would be a standard minimum package of required benefits for employer-based and public programs, with legislative requirements on maximum cost-sharing. Choice of provider might be restricted in some states.

3. Administration of the private programs would be the responsibility, as now, of the employers and/or insurance companies. Administration of the public program would be the responsibility of the states, with the objective of maximizing responsiveness to local needs and conditions.

4. It would control costs through giving the states a substantial financial stake in ensuring that the public program costs did not grow faster than nominal GNP. State control would also allow the testing of different mechanisms for cost control, with the ultimate objective of identifying the most effective cost-containment strategies.

5. The cost would be borne by employers, employees, and taxpayers. Employers would be protected from exorbitant costs by being allowed the option of paying into a public plan rather than providing health insurance themselves. The poor and unemployed would be protected by having their coverage under the public program subsidized on a sliding scale.

6. The political feasibility test would be met by retaining a major role for insurance companies and by retaining the role of employer-based coverage—thus reducing the tax increase needed to ensure universal coverage. By allowing flexibility in design of cost-containment strategy, some of the controversy over this issue would also be deflected.

Our proposal is also not without problems. First, our approach would still have adverse effects on the profitability of small businesses and on the employment prospects for low-wage workers—although these effects would be less

than under conventional mandates and less than under proposals with higher tax rates. Second, some states may not want the responsibility we envision or have the capacity to carry it out. But several Canadian provinces are relatively small and are able to perform the same administrative functions within the Canadian national health system. In addition, since the federal government would continue to administer the Medicare program, states would have the option of tying their policies for hospital and physician payment and utilization control to those of Medicare. Finally, the proposal would require new tax revenues. Some of this replaces funds spent at the local level to finance public hospital deficits and to reduce uncompensated care in other hospitals. Some of it would also replace expenditures borne by corporations in purchasing private health insurance plans and some of the insurance premiums borne by individuals privately. There would, nonetheless, be a visible increase in taxes at the federal and state levels. But it seems a modest price to pay for resolving the problem of the uninsured and for gaining control over the growth in costs that now seems endemic to the US health care system.

References

1. Monheit A, Short P. Mandatory health coverage. *Health Aff.* Winter 1989;8:22-39.
2. Moyer E. A revised look at the number of uninsured Americans. *Health Aff.* Summer 1989;8:102-110.
3. Swartz K. *The Medically Uninsured: Special Focus on Workers*. Washington, DC: The Urban Institute; July 1989.
4. Zedlowski SR. *Expanding the Employer-Provided Health Insurance System: Effects on Workers and Their Employers*. Washington, DC: The Urban Institute. In press.
5. Nelson C, Short K. *Health Insurance Coverage 1986-1988*. Washington, DC: Bureau of the Census, US Dept of Commerce; March 1990. Current Population Reports, Household Economic Studies, Series P-70, No. 17.
6. Schieler GJ, Poulier J-P. International comparisons of health care expenditures. *Health Care Financ Rev.* 1989 Annual Supplement:1-8.
7. Poulier J-P. Health care expenditure and other data. *Health Care Financ Rev.* Summer 1990; 11:159-167.
8. Himmelstein DU, Woolhandler S. Cost without benefit: administrative waste in U.S. health care. *N Engl J Med.* 1986;314:441-445.
9. Himmelstein DU, Woolhandler S. A national health program for the United States. *N Engl J Med.* 1989;320:102-108.
10. The Pepper Commission (US Bipartisan Commission on Comprehensive Health Care). *A Call for Action: Final Report*. Washington, DC: US Government Printing Office; September 1990.
11. *Balancing Access, Costs, and Politics: The American Context for Health System Reform*. Washington, DC: The Urban Institute. In press. Urban Institute report 91-6.
12. Evans RG, Lomas J, Barer ML, et al. Controlling health expenditures—the Canadian reality. *N Engl J Med.* 1989;320:571-577.
13. Enthoven A, Kronick R. A consumer choice health plan for the 1990s. *N Engl J Med.* 1989;320:29-37, 94-101.

A Tax Reform Strategy to Deal With the Uninsured

Stuart M. Butler, PhD

The high level of uninsurance in the United States is due in large measure to the tax treatment of health care, which is based on the tax exclusion for company-provided plans. Correcting the perverse incentives for providers and patients resulting from this tax treatment is the crucial step to creating a national health care system that is affordable and efficient. The Heritage Foundation proposal calls for the elimination of the current tax exclusion and its replacement with a system of refundable tax credits for the purchase of health insurance and medical services.

(JAMA. 1991;265:2541-2544)

ALMOST 90% of Americans say that fundamental changes are needed in the nation's health care system. Dissatisfaction centers on the shortcomings of health insurance.¹ One of the most pronounced deficiencies of this system, of course, is that as many as 37 million Americans lack health insurance.

Policymakers tend to assume that the only way to correct the problem is to construct a national health care system in which tighter regulation is used both to control providers and to constrain the appetites of consumers. Whether such policymakers favor a government-run Canadian-style system, or one requiring employers to provide universal access to health insurance, the assumption is that normal consumer choice within free and open markets can have no major role. This assumption is erroneous. Policymakers should recognize that the deficiencies in today's US health care system are due in large part to powerful and perverse incentives resulting from the current tax treatment of health care. By correcting those incentives it would be possible to construct a system based on consumer-driven markets, in which the problem of uninsurance is solved and resources are used more efficiently with little or no increase in government expenditures.

HOW THE TAX SYSTEM LEADS TO UNINSURANCE

The vast majority of American families receive medical insurance through their employer. The tax code strongly encourages such employer-provided

coverage as a fringe benefit because such plans are excludable without limit from the employee's taxable income. While limited tax relief is also available to the self-employed and those incurring unusually heavy medical costs, for most Americans the company plan is the only way of receiving a tax break for medical costs.

The tax exclusion for company-based plans undoubtedly has encouraged the spread of health insurance and eased the financial worries of millions of families. But it is also a major cause of uninsurance and rapidly escalating health costs. There are three reasons for this:

1. *Inequity in tax assistance.*—A tax exclusion provides the employee with tax relief from all taxes (including payroll tax) at his or her marginal tax bracket. Thus, the tax benefit is highest for employees in the highest bracket with the most expensive health plans. A highly paid executive can easily receive a tax subsidy worth over 40% of the cost of a generous package, when state and local tax relief is considered. Meanwhile, an employee in the same firm, with children, making \$10 000, may be below the tax threshold and receive no income tax break at all. Worse still is the individual who has no company plan, or a plan not covering his or her family. This person normally must pay in after-tax dollars for his or her family's insurance or out-of-pocket medical expenses.

Thus, the tax code gives virtually no help to Americans at the bottom of the income ladder who are not covered by company plans, while it can mean thousands of dollars in tax subsidies for higher-paid individuals. It is little wonder that approximately three quarters of

the uninsured (those lacking private insurance or eligibility for public programs) are workers or the dependents of workers, concentrated heavily among lower-paid employees.² Moreover, a company-provided plan does not have to contain any specific features, such as preventive medical care, family coverage, or catastrophic protection, to be eligible for the tax exclusion. So it is not unusual to find workers with a very expensive plan paying for all routine dental care, and yet lacking catastrophic protection.

2. *Job mobility disincentives.*—A job change of any kind, whether voluntary or forced, usually requires a family to change its insurer because coverage is employer-based. This often means waiting periods and preexisting condition clauses in the new plan, and possibly some change in benefits that the family would not have freely chosen. For families with severe health problems this can mean that moving to a better job is impossible, and a layoff can be a disaster.

3. *Inflationary pressure.*—With health care largely paid for by the employer (completely so in the case of first dollar coverage, which covers all costs), an employee has little or no incentive to be economical when seeking services. If the employee does try to economize, it is the employer who normally will gain the vast bulk of the savings (assuming the annual deductible has been exceeded). Knowing that the patient has little incentive to economize, physicians and hospitals also have little incentive to hold down costs. Providing the perceived value of a service is greater than the copayment—if any—faced by the patient, the patient will have no cause to challenge the price charged the insurer and ultimately the employer.

This lack of concern for price is, of course, a recipe for inflation. This in turn adds to the number and plight of the uninsured. Rising costs force more companies to reduce coverage or drop dependents from plans. The annual survey of corporate health insurance conducted by the New York City benefits

From The Heritage Foundation, Washington, DC.
Reprint requests to The Heritage Foundation, 214 Massachusetts Ave NE, Washington, DC 20002 (Dr Butler).

consulting firm of A. Foster Higgins & Co, for instance, found employees facing an average increase of \$20 per month in 1990 for their share of family health plan costs, and more firms encouraging employees to accept restrictions on their choices of medical care (*Wall Street Journal*, January 29, 1991:B1). Higher insurance rates cause more families without company plans to forgo insurance while facing higher out-of-pocket costs.

HOW A MARKET-BASED NATIONAL HEALTH CARE SYSTEM WOULD WORK

Proposals that would mandate employers to provide insurance for employees and their families or pay a payroll tax for public insurance (so-called play-or-pay proposals) simply would force all employers into today's flawed system. The result would be higher labor costs and fewer employment opportunities for workers whose low skills and whose insurance or health payroll tax costs would be high compared with their output. In addition, if employers were prohibited from reducing benefits or coverage, they would resort to even tighter controls over the most basic health care decisions of American families. A Canadian-style system similarly would use regulation rather than markets to determine access and to allocate resources. As we now see in the Canadian system, just as with its forerunner the British National Health Service, removing market prices as the primary regulator of demand leads to chronic overdemand when compared with supply and to waiting lines and shortages.^{3,4}

The alternative to such systems based on curbing consumer choice and expanding regulation, which implicitly remove consumer-driven markets from health care, is to address the perverse incentives that lead to today's shortcomings, and to construct a system based on an active consumer-driven market. Such a system has been developed by The Heritage Foundation.⁵

The Heritage Foundation proposal is based on a reform of the tax treatment of health care, designed to achieve two goals. First, by changing the structure of existing tax relief, it would provide more help to the uninsured to obtain health care and insurance, and less to those who do not need generous tax subsidies. The available pool of forgone tax revenues at the federal level alone is estimated by the Congressional Budget Office to be worth \$48 billion in 1991.⁶ Second, the new structure of tax relief would provide stronger incentives for consumers to challenge provider costs and to seek the best insurance value for

their money.

The Heritage Foundation proposal calls for two principal steps:

1. *Replace today's tax exclusion with a new system of refundable tax credits for health expenses.*—The current tax exclusion for company-provided health benefits would be phased out over several years. Any health package received by a worker would be included as taxable income on the employee's W2 tax form. If a company were to discontinue or scale back its health plan, it would have to add the cash value of the reduced benefits to employee paychecks. Over the same period, however, a new system of tax credits in the personal tax code would be introduced for family health care costs (out-of-pocket costs, insurance premiums, and prepaid plans). These credits would be "above-the-line," meaning they would be available to those who do not itemize deductions on their tax returns. They would also be "refundable." This means that if the total credit exceeded the family's tax liability, the Internal Revenue Service would remit the difference.

The size of the credit (in percentage terms) would depend on the family's total annual health care spending compared with its income; the higher that ratio, the higher the percentage credit. Thus, a typical family incurring insurance and direct medical costs (including any employer-paid benefits) equal to 10% of its annual income, might be eligible for a 20% credit. If that same family faced unusually high costs, eg, 30% of income, the credit might rise to 50%. Higher costs would mean a still larger percentage credit, such that the actual costs to the family, net of the tax credit, would be manageable. Similarly, if the family's annual costs were low compared with its income, the percentage credit would be lower than 20%, and perhaps phased out entirely above a certain income. The credit would be designed to ensure that these net costs would not normally exceed 10% of family income. By comparison, the most comprehensive analysis of family health expenditures currently available, based on the National Medical Care Expenditure Survey of 1977, showed that out-of-pocket premium and direct service expenses averaged 10.1% of family income for families earning less than \$12 000 per annum, falling to 2.5% for families earning more than \$20 000.⁷

2. *Establish a "Health Care Social Contract."*—Under this "social contract," each head of household would be required, by law, to enroll all family members in a health plan containing at least a federally prescribed basic package of features. These would include

catastrophic stop-loss insurance (which limits out-of-pocket costs to a fixed dollar amount), hospital and physician coverage for all family members, and routine preventive care. The out-of-pocket deductible and copayment in the health plan could not normally exceed 10% of adjusted gross income. Health plans would be required to offer a series of premiums, based on different out-of-pocket costs, and consumers would be required to choose a plan meeting at least the 10% requirements. While this would mean lower-income families typically would face higher premiums, reflecting the out-of-pocket limit, this in turn would be offset by the larger tax credit available to them.

The federal government would in turn guarantee to make it financially possible for each household to discharge this legal responsibility in one of the following two ways: through the system of refundable tax credits or by granting access to Medicaid or Medicare. Thus under The Heritage Foundation proposal, all Americans would have at least a basic package of medical care, paid for by themselves or by the federal government.

This two-pronged market strategy would have significant effects on the American health care system. First, it would guarantee basic health coverage to all Americans, irrespective of their place of employment—or whether they were employed at all.

Second, government help to offset medical costs would be based on medical expenses as a proportion of income, not on the family's marginal tax rate. Thus a part-time employee of Joe's Bar and Grill would be eligible for exactly the same *structure* of tax help as a senior executive with Megacorp Inc, but the part-time employee—or the chronically sick individual—would receive more cash help by virtue of his or her income and likely medical expenses.

Third, the credit system would introduce a powerful tool to curb rising health care costs, since families would have a strong incentive to seek the best value for their money in their health care decisions and to avoid overutilization. One reason for this is that the individual purchaser of insurance or services would keep any savings (net of the credit) gained through prudent buying, rather than these savings going to the employer. This incentive would be strongest for those eligible for only a small credit (generally the more healthy and affluent buyers), and weakest for those eligible for a large credit. Another reason is that an employee no longer would effectively be locked into the plan provided through the employer. Thus,

the employee could "shop around" for a plan with the necessary services at the best price. That in turn would intensify competition among insurers and service providers. A family might choose more services that their company plan used to offer. Or it might mean fewer extra services, if a healthy employee had been overinsured, leaving the family with extra cash income.

Fourth, the consumer-driven model would drastically reduce the need for expensive administrative regulation by insurers and employers. Most critics of the current US health care system point out, correctly, that it is probably the most bureaucratized and administratively top-heavy of systems.⁸ This did not just "happen." In the rest of the US economy, consumer choices based on real prices spur efficiency and force providers to compete by streamlining overhead costs. But in health care provision, the actual cost of services is largely irrelevant to consumer decisions. Thus, the immediate payers of medical bills—insurers and employers—have been forced to install a system of administrative controls and paperwork in an effort to allocate resources reasonably efficiently *in spite of* consumer demands. Consumer choice is a far more effective method of regulating prices and encouraging efficiency. It does not require a vast superstructure of resource planners trying to manage consumers. It is the individual decisions of consumers themselves that achieve an efficient system.

Fifth, a tax system allowing Americans to select from a full range of competing plans would end most of the employment mobility problems plaguing today's system (and inherent in employer-mandated proposals) because a family would not change plans merely because the head of the household changed jobs. Moreover, because the employer would not be responsible for providing health coverage under The Heritage Foundation proposal, there would not be an incentive for firms to avoid hiring individuals who would pose high insurance costs—another major drawback of mandated-benefits schemes.

Sixth, reforming the tax code would allow the uninsured to be protected at a far lower cost to the government than other approaches. Indeed, it might well be accomplished without any net increase in the federal deficit. The Congressional Budget Office estimates that if the current tax exclusion for company-based plans were ended and replaced with a flat 20% income tax credit for insurance costs up to \$250 per month for families (\$100 for individuals), the federal government would collect an ad-

Revenue Estimates of Options for Limiting the Tax Exclusion for Company-Based Health Plans and Introducing a Credit in the Personal Code*

	1991	1992	1993	1994	1995
Monthly limit on exclusion†					
\$400 for families/\$160 for individuals					
Total receipts, \$ in billions	1.5	3.1	4.5	6.7	9.6
Affected recipients, %	15	16	19	22	26
\$300 for families/\$120 for individuals					
Total receipts, \$ in billions	5.4	10.1	13.6	18.4	23.6
Affected recipients, %	32	35	39	40	42
Annual refundable credit‡					
\$200 per individual, up to \$600 per household					
Total cost, \$ in billions	-0.4	-6.1	-6.6	-7.3	-7.8
Permanent 25% deduction for self-employed, \$ in billions	-0.2	-0.4	-0.5	-0.5	-0.6

*Estimates assume that contributions to cafeteria plans for health care will be included in the computation of employer contributions. Data from Department of the Treasury, Office of Tax Analysis.¹⁰

†The monthly exclusion limit and the value of the refundable credit for 1991 and beyond are indexed by the consumer price index for all items.

‡The refundable credit is available to persons who do not have employer-provided insurance or public health insurance.

ditional \$89.4 billion in net additional income and payroll taxes over 5 years.⁶ This means that the basic 20% credit considered by the Congressional Budget Office could be expanded by additional credits in the amount of nearly \$18 billion per year and still remain budget neutral. The US Treasury has analyzed a limited version of a plan similar to The Heritage Foundation proposal. If the monthly exclusion for company-provided plans were capped at \$400 per family (\$160 per individual), the treasury estimates that the extra revenue would, by 1995, finance an annual refundable credit of \$200 per individual (up to \$600 per family) for families lacking company plans. If the monthly cap were placed at \$300 per family (\$120 per individual), the credit would still leave the treasury with a net annual surplus of \$15.8 billion by 1995. This financial cushion would permit more generous credits to needy families and finance the refundable credits envisioned in The Heritage Foundation proposal. A summary of the treasury's estimates is provided in the Table.⁹

Seventh, the tax credit system would reduce Medicaid and welfare costs. Since The Heritage Foundation proposal includes a system of refundable tax credits for lower-income individuals, it would eliminate the current disincentive for many welfare recipients receiving Medicaid to take a job with few or no medical benefits. The Medicaid program would be retained under The Heritage Foundation proposal as an integral part of the welfare system. Subsidized risk pools and similar state-based innovative strategies would also be encouraged as a safety net to deal with unusual situations,¹⁰ although the number of uninsurable Americans would decline under the proposal (see below).

Eighth, the strong consumer incen-

tives in The Heritage Foundation proposal would reduce pressure for medically unnecessary state mandates on insurers. Such mandates are a significant factor in rising insurance costs. Moreover, according to a statistical study by Goodman and Musgrave,¹¹ as many as 9.3 million Americans lack health insurance specifically because of the additional costs due to mandates. With families paying directly for insurance, rather than these costs being "hidden" in company plans, there would be far less voter acceptance of pressure from provider groups to add new services to state mandates. The same political dynamic would help offset providers' lobbying at the federal level to expand the legally required basic package.

There are a number of understandable concerns about such a consumer-driven system based on individual choice of a medical plan, including the following:

1. *Can average Americans really make informed choices about health care?*—The more informed and technically sophisticated a consumer is, the more likely he or she is to make sound decisions regarding a medical plan. But there are two reasons why individuals with little medical knowledge can be confident buyers in the system envisioned under The Heritage Foundation proposal.

The first is that any comprehensive plan would, under federal law, have to include at least the basic set of services. The second reason is that a system based on individual buyers does not in any way rule out the formation of group buyers. Indeed, most individuals probably would join groups, both to gain bargaining power as organized buyers, and to delegate detailed purchasing decisions to an organization they trusted. Such groups would negotiate plans with

providers and insurers on behalf of their members, much as companies do today. The important difference is that consumers would be able to choose a buyer group they really trusted and still obtain tax benefits; today they are effectively restricted to a group organized by their employer.

Various groups can be imagined participating in a system like The Heritage Foundation proposal. A trade union, a professional organization, or a state farm bureau might manage a plan on behalf of its members. Churches, university alumni groups, and school associations also might act as brokers. Other groups might comprise those who suffer from particular ailments, such as diabetics, who would be seeking the most economical plans supplying additional specialized services. The Heritage Foundation proposal, unlike the mandated benefits approach, would make it very easy for these specialized plans to develop.

2. *Wouldn't adverse selection undermine The Heritage Foundation proposal?*—Active consumer choice is considered the key to the workings of other segments of the economy. In the health sector it is usually deemed adverse. The reason for this is that the principal method we use to subsidize working Americans facing high medical costs is equal premiums for company-based group plans. In this way the healthy subsidize the unhealthy. Naturally, a problem immediately arises if healthy consumers are permitted to opt out of the group and choose a lower-cost plan reflecting their better health risk. Hence, elaborate steps are included in managed care proposals to restrict or guide consumer choices.¹²

The Heritage Foundation proposal avoids this problem by cross-subsidizing through the tax code, rather than through premium setting. Under The Heritage Foundation proposal there would indeed be a tendency for healthy individuals to purchase lower-priced plans, leaving higher-risk individuals to face steeper premiums. But the higher-risk consumers would receive large credits to offset the higher costs, financed by US Treasury savings achieved from lower revenue losses on the leaner plans chosen by healthy individuals. This method of cross-subsidy is not just more precise and consistent, and less expensive to the taxpayer, than the necessarily wide variations in subsidy levels with company groups. It would also reduce the problem of uninsurable individuals. Today such individuals cannot be insured except at rates they or their employer cannot afford. With the sliding scale credit in The Her-

itage Foundation proposal, however, realistic premiums could in many instances be charged and paid.

3. *Would a tax credit system be difficult for the consumer to operate?*—Employees would instruct the payroll department of their employer to adjust their withholding to reflect their anticipated credit. If the employee was eligible for a refundable credit, that credit would be added to the paycheck each pay period. At the end of the year the total credit would be adjusted when the family filed its tax return.

Variants of this basic mechanism would deal with most potential difficulties. If anticipated costs were to rise unexpectedly, the employee could change the number of exemptions claimed (as an individual would do if he or she were to take on a larger mortgage for a home). If the individual became unemployed, or a sudden outlay exceeded the family's immediate ability to pay, despite catastrophic protection, federal regulations could require providers to wait for payment until the appropriate refundable credit was processed by the Internal Revenue Service. In addition, to ensure regular premium payments, a requirement could be placed on larger employers to make a payroll deduction on behalf of their employees and to remit it to the insurance company chosen by the employee, as many firms currently do for 401K savings plans.

The primary tool to assure compliance with the mandate for families would be to require proof of basic insurance to be attached to the annual tax return. Insurance companies or health plans providing the basic comprehensive package would be required to send enrollees a statement indicating the period of coverage (if an employee switched companies, the statement would indicate the change). There would be fines for families failing to include proof of insurance with their tax return. While some families would still evade the requirement, just as some evade taxes, this system would reduce the problem to an acceptable level.

CONCLUSION

A structural change of this kind might seem politically unrealistic, but there are several reasons to believe otherwise. It is certainly less radical than replacing the entire system with a Canadian-style system. It can also be introduced gradually. A specific credit to cover one segment of the uninsured, for instance, could be paid for with a modest cap on the current exclusion. When consumers and insurers had grown accustomed to that change, the credit could be expanded and the cap reduced.

Moreover, the idea of individual tax credits to help certain categories of Americans to purchase medical insurance or services is not new or unique to The Heritage Foundation proposal. The 1991 budget passed by Congress in October 1990, for instance, contains a new program granting a 50% refundable tax credit for low-income families purchasing insurance to cover children not covered under company plans.

Capping or limiting the exclusion of company plans also is not a new idea. It was routinely proposed as a deficit reduction measure during the Reagan administration. It made little headway then because workers saw no advantage in supporting such a measure. Blending a phaseout of the exclusion with a new system of tax credits leads to a very different political equation, however, since millions of employees would gain from such an exchange, including many workers currently with generous plans. In today's climate of deficit reduction and concern about rising unemployment, a "balanced budget" proposal that does not mean huge new federal outlays or additional payroll costs for business has a distinct attraction.

References

1. Blendon RB, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in ten countries. *Health Aff* 1990;9(2):185-192.
2. Short P, Cornelius L, Goldstone D. Health insurance of minorities in the United States. *J Health Care Poor Underserved*. 1990;1(1):15-16.
3. Walker M. Why Canada's health care system is no cure for America's ills. *Heritage Found Int Briefing*; no. 19.
4. Globberman S, Hoyer L. *Waiting Your Turn: Hospital Waiting Lists in Canada*. Vancouver, British Columbia: Fraser Institute; 1990.
5. Butler S, Haismaier E, eds. *A National Health System for America*. Washington, DC: The Heritage Foundation; 1989.
6. *Reducing the Deficit: Spending and Revenue Options, Part II*. Washington, DC: Congressional Budget Office; 1990:143-146.
7. National Center for Health Services Research and Health Care Assessment. A summary of expenditures and sources of payment for personal health services from the National Medical Care Expenditure Survey. In: *National Health Care Expenditures Study, Data Preview 24*. Washington, DC: US Dept of Health and Human Services; 1987:Table 12.
8. Himmelstein DU, Woolhandler S. Cost without benefit: administrative waste in US health care. *N Engl J Med*. 1986;314:441-445.
9. Department of the Treasury, Office of Tax Analysis. *Financing Health and Long-term Care*. Washington, DC: US Dept of the Treasury; 1990:88.
10. Wasley T. Health care for the poor, unemployed, and high-risk. In: Butler S, Haismaier E, eds. *A National Health System for America*. Washington, DC: The Heritage Foundation; 1989:91-119.
11. Goodman J, Musgrave G. *Freedom of Choice in Health Insurance*. Dallas, Tex: National Center for Policy Analysis; 1988.
12. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s. *N Engl J Med*. 1989;320:29-37, 94-101.

The 'USHealth Act'

Comprehensive Reform for a Caring America

Rep Edward R. Roybal

MUCH to the credit of THE JOURNAL and its editors, this in-depth discussion is significant in its timeliness. It should be a precursor to action. Having just passed the largest federal deficit reduction package in the history of this nation, the federal government is in a position to tackle the societal problems that have seemed so intractable for so long. One of the most intractable problems has been caring for the health of the uninsured and underinsured, the theme of this issue of THE JOURNAL. As this issue makes its way to hundreds of thousands of key decision makers in and outside of the medical community, it is crucial that ever larger portions of that community become actively committed to comprehensive reform and to helping ensure that the terms "uninsured and underinsured Americans" will be removed from the American health care vocabulary.

THE ENVIRONMENT FOR CHANGE

Why this great need for change? It is because of who these Americans are, the number of people at risk, and the nature of their plight. Uninsured and underinsured Americans include, as one example, the young working family lacking adequate insurance. This may not stop them from getting care for the children, often in an emergency department, but it inhibits the parents from getting care. This same young family lives in fear of being impoverished if hit by a catastrophic and expensive illness. We also should consider the middle-income family whose brain-injured teenage daughter faces years of rehabilitation and thousands of dollars in medical bills each month for the foreseeable future. Also, we need to think about the middle-aged man whose grandparent and parent suffered from Alzheimer's disease. Not only does he carry the burden of their care but he fears having Alzheimer's disease himself. Then there is the couple in their early 60s whose retirement plans are in jeopardy as the

wife faces many expensive years in a nursing home. Finally, uninsured and underinsured Americans include the couple in their 70s who have lived just above "poverty" all their lives and who now can barely afford needed medical care for even one of them. As a result, the husband gets only minimal care and the wife goes without care. These are Americans we should care about; as a nation, we are failing them.

As shown by the lives of these Americans, we are confronted with a somewhat tattered and increasingly unaffordable and unsustainable health care system. In some ways this is the best system and in some ways it is the worst system, but in almost all ways it is unfair, incomplete, and inadequate.

Although we have a somewhat tattered system, there are very powerful forces in health and long-term care pushing us toward change while pulling us in different directions. The most powerful force is the rapid escalation of health and long-term care costs. On the one hand, any solution dealing with access becomes more expensive unless there is a very strong cost-containment program. On the other hand, the increasing unaffordability of health and long-term care for even the middle class creates pressure for a broad-based solution. Will we let those forces drive us, or will we assert leadership and channel those forces to develop a comprehensive health and long-term care system protecting all Americans?

As we move into the 1990s and, as noted above, having just enacted a 5-year, \$500 billion dollar federal deficit reduction plan, there is no doubt that America and its leaders face new fiscal realities. To the extent that the deficit reduction plan fails and federal deficits worsen, the policy climate also worsens. If the deficit reduction plan works, the policy climate improves. In either case, having faced up to the fiscal realities, the federal government is in a better position than it has been for the past 5 years to realign its priorities and address the larger unresolved issues on a pay-as-you-go basis.

Within this environment and opportunity for change, action on comprehensive

reform can take many forms. Compared with the early 1980s, many alternative solutions are now available and are being advanced by congressional leaders, coalitions, and experts. The most recent and prominent proposal was the plan laid out by the "Pepper Commission," a bold plan that would effectively extend health and long-term care protection to all Americans.

Although the commission's recommendations may not be the "perfect solution," they may just be the "perfect compromise solution," and they do take us far on the journey toward a healthy and caring America. While I support the commission plan and am willing to support several of the other major comprehensive reform proposals, I believe that some plans to care for the American people are more effective and affordable than others. The "USHealth Act" is one of them.

THE 'USHEALTH' SOLUTION

I first proposed the USHealth Act (HR 2980 in the 101st Congress) in 1986, when almost no comprehensive reform proposals were being considered. The USHealth Act was designed to help restart the debate on health care reform and to incorporate the knowledge gained since the late 1970s.

What is USHealth? If enacted, the USHealth program provides catastrophic and basic health protection for all Americans regardless of age, income, or illness. It offers an affordable American alternative to the current health care system by constraining health care cost increases, as Canada has done with great success for over a decade. The program provides all Americans with broad health insurance protection, including coverage for basic health and long-term care and special safeguards for catastrophic illnesses, such as Alzheimer's disease. In addition, the program provides assurances that health care quality will be maintained or improved.

Organization

Under my proposal, the program is managed by the USHealth Administration, which replaces the current

Congressman Roybal (D, Calif) is the chairman of the US House Select Committee on Aging.

Reprint requests to Select Committee on Aging, US House of Representatives, Room 712, HOB Annex #1, Washington, DC 20515 (Rep Roybal).

Health Care Financing Administration (HCFA). The USHealth Administration is treated as an independent agency whose funding is considered "off budget" for most federal purposes.

USHealth changes the system of health insurance in this country by consolidating Medicare, Medicaid, and private insurance into a single insurance system. This system is funded by cost sharing, employer contributions, state revenues, federal excise and income taxes, and beneficiary premiums. At the same time, it expands the existing role of insurance companies through contracts for a much larger volume of bill processing and review, especially since the program covers, for the first time, millions of long-term care recipients and over 30 million uninsured persons. This partnership with the nation's insurance industry protects the financial viability of insurance companies while ensuring comprehensive coverage for every American.

The design is straightforward and builds on the ever-growing knowledge and experience base of the Medicare program as well as the experience with both private insurance and the federal-state Medicaid program. USHealth takes the current Medicare program as its foundation, with the following provisions: It extends protection to all Americans regardless of age or income. It expands coverage to include long-term care and essential health care not currently covered by Medicare. It uses the developing quality assurance system. It brings to bear the evolving cost-containment effort. In effect, the Medicare card of today becomes the USHealth card of tomorrow, and every American (both citizens and permanent residents) would have one.

While today's Medicare program is certainly not perfect, in my opinion it outperforms the alternatives, whether they be the federal-state Medicaid program or the best of the private insurance firms. To cite one example, Medicare returns a much higher ratio of benefit dollars for every premium or tax dollar collected than do private insurance firms. The imperfections in Medicare can be fixed if there is a commitment to doing so and if all Americans have a solid stake in it. Both will exist if every American is both a beneficiary and a financier of USHealth, the successor to Medicare.

Cost Containment

As the debates of the last two decades have convinced us all, cost containment is essential to the political and financial viability of any comprehensive solution. USHealth is fiscally responsible and af-

fordable. For the first time, total national health and long-term care costs are capped at 13% of the nation's gross national product (GNP). Under that ceiling is a second ceiling on long-term care costs set at 1.1% of GNP; this second ceiling is indexed to changes in the population's severity of illness, assistance with daily living (ADL) levels, and cognitive impairment levels. While USHealth places a cap on total expenditures by law, it also allows for that legislated cap to be changed if the American public and its representatives decide to do so after weighing the tax and health consequences against each other.

As should always be the case, expenditures for improving health care must be considered in the context of expenditures for competing social needs. Comprehensive models such as USHealth do just that. The expenditure cap of 13% of GNP represents a modest increase from where we are today but is lower than where the expenditure cap will be at the turn of the century. Again, the American public and its representatives will have a full debate and will decide whether 13% is too high or too low in the context of other national needs. Today, there is much less opportunity to have that debate, and health care continues to absorb ever-larger portions of GNP.

Under the current system, total national health expenditures are estimated to reach about \$1 trillion in 1996. Under USHealth, total expenditures would be capped at 13% of the GNP, and the expenditure cap under USHealth in 1996 is also estimated to be about \$1 trillion.

Health care providers are paid prospectively set fees based on such Medicare models as diagnostic related groups (DRGs) and resource-based relative value scales (RBRVSs). As in the RBRVS system, such fees would be developed in consultation with representatives of health care providers. These fees are indexed to our nation's ability to pay as measured by increases in per capita GNP. As with today's Medicare and Medicaid programs and private insurance, the volume and intensity of health care services under this program must also be addressed. If these problems are solved, the combination of the expenditure cap and the fee system under the USHealth program will result in fair treatment of health care providers and appropriate access to needed and quality health care. Also, under this program, each state does have the option of setting up an alternative payment system as long as it performs as well as the federal system.

Those who are concerned about such an all-encompassing approach to cost

containment should keep in mind that this nation's health and long-term care expenditures are projected to easily exceed 13% of GNP by the year 2000, but *without resolving the crisis* facing people with catastrophic illnesses and people without adequate health insurance protection. Establishing a fair cost-containment program that treats everyone equally and setting a national health and long-term care expenditure cap is a fair trade-off if we can secure comprehensive protection for all Americans.

In the interest of making people aware of the cost of health care, beneficiaries are required to share some of the cost. For medical and skilled nursing care, beneficiaries are required to pay coinsurance of 20%. For nonskilled long-term care, beneficiaries are required to pay coinsurance of 25%. To protect people against very expensive, catastrophic, and short-term illnesses, this cost sharing is limited to no more than \$600 per person (indexed to per capita GNP) per year for medical and skilled nursing home and home health care. For long-term illnesses needing nonskilled long-term care, there is a separate cost-sharing limit of \$1000 per person per year (indexed to per capita GNP). Cost sharing is optional for qualified health maintenance organizations (HMOs), as under the current Medicare program. Poor people who have incomes less than 100% of poverty and people who spend down into poverty are virtually exempt from any cost sharing.

Covered Care

USHealth covers a broad range of preventive, short-term care, and long-term care (both skilled and custodial) services. In deciding what care should be covered, we examined benefits covered by Medicare, Medicaid, and private insurance programs. We also attempted to determine what services, for example, prevention services, it makes sense to cover when the insurance program is responsible for short- and long-term care for the whole nation and for the entire life span. Finally, we took into account those services that were most critical in preventing both financial and emotional devastation resulting from catastrophic short- or long-term illnesses. As a result, the decision was made to cover a broad range of health and long-term care services and make them subject to tight utilization review and an overall national expenditure cap.

Under this program, the basic health and long-term care benefits include standard Medicare-covered services as well as the following: inpatient and psychiatric hospital services, medical and

other health services, comprehensive outpatient rehabilitation facility services, health care services provided by a rural medical care access facility, extended care and nursing facility services, skilled home health services, hospice services, alcohol and drug abuse rehabilitation, and outpatient mental health services (including community mental health centers and state-authorized services provided by a clinical psychologist, clinical social worker, or psychiatric nurse-specialist).

In addition to the services traditionally covered by Medicare, medical and other health services are expanded to include nurse-practitioner and clinical nurse-specialist services; Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) programs for those under age 21 years; family planning for individuals of childbearing age; private-duty nursing services; physical therapy; occupational therapy; speech and language therapy; audiology; and other medical or remedial care recognized under state law and specified by the USHealth program. The program also covers physical checkups, health screening, immunizations, health risk reduction, and other preventive services. As would have been the case under the now-repealed Medicare Catastrophic Coverage Act, prescription drugs are covered after an annual deductible of \$100. Dental services (including dentures) and eyeglasses are to be added before the year 2000 unless total USHealth program expenditures exceed the national health expenditure cap.

With respect to long-term care, benefits are covered for chronically ill individuals, including those with at least two age-appropriate ADLs or a similar level of cognitive impairment. Long-term care benefits include care management services; nursing care; homemaker/home health aide services; physical, occupational, speech, respiratory, and corrective therapy; patient and care giver education, training, and counseling; medical social services; day health care; respite care (minimum of 120 hours per year if eligible); nursing facility services (as under the current Medicaid program); medical supplies; and limited transportation. Other long-term care services, including personal care, may be covered if authorized by the care management agency and if total costs do not exceed the expected cost.

Compared with almost all other comprehensive reform packages, with the exception of the Pepper Commission's, this program has a carefully articulated system providing long-term care protection. Long-term care benefits are

managed through a care management system that ensures that beneficiaries receive the care they need and that taxpayers will not face increases in costs beyond increases in their ability to pay. Furthermore, the bill's long-term care benefits and care management are flexible to best match beneficiary needs and promote beneficiary independence. This last point is critical to a long-term care program that addresses the needs of both the patient with Alzheimer's disease with major cognitive impairment and the young adult with major disabling conditions and no cognitive impairment.

Provider, Patient, and Program Relationship

While applauding the comprehensive benefit structure of this program, many health care providers will likely be uneasy at the prospect of Medicare being the primary payer and at the potential intrusions into patient care. These concerns, however, need to be put in perspective. Whether or not USHealth becomes the plan of choice, the relationship between health care provider and payer will be much the same. It will always be difficult to strike a balance among the interests of the health care provider, the patient, and the payer, who may be the patient or a third party. As with Medicare and Medicaid, private insurers no longer have the luxury of letting health care providers operate without some review and restraint. Under the USHealth Act there is a common interest in eliminating unnecessary burdens on both health care providers and patients.

Through its benefit, payment, and quality assurance structure, the program tries to make critically needed improvements without disrupting the essential professional and personal relationship between individual patients and their health care providers. Patient and health care provider "freedom of choice" is preserved. Patients are free to continue their relationship with their existing physician or hospital and are free to choose among fee-for-service or capitation providers. Health care providers, such as public providers and private profit and not-for-profit providers, are included in the program.

Quality Assurance

Continuing a growing national commitment to quality assurance, USHealth upgrades and extends the current Medicare quality assurance system. The current Medicare system is upgraded by making quality assurance the highest priority for peer review organizations (PROs), by increasing con-

sumer access through "hotlines" and consumer advisory boards, by establishing a national quality assurance council, and by improving methods for monitoring and assuring the quality of care. Quality assurance protection is extended and applies to all care, settings, providers, and patients covered by the program. As was the case with the cost-containment program, states have the option to develop their own quality assurance program as long as it performs as well as the federal program.

Building on recent changes in Medicare and recent reports by organizations such as the National Institute of Medicine, the quality assurance program will need to continue to undergo change in future years. As our knowledge base grows with respect to measuring and assuring quality, our approach to quality assurance will also have to change. USHealth creates the "vessel" for an evolving quality assurance program without binding us to current approaches. For example, on the issue of outcome measures, the USHealth quality assurance program intends to use current approaches while recognizing the difficulty of moving to outcome-oriented quality assurance. Because USHealth is a national program, outcome measures of the society's health as a whole as well as of subgroups within our society have direct significance. Furthermore, in the context of a national health program, quality assurance can help monitor the impact of cost containment and signal when cost containment is having a significant negative effect on quality and access.

Financing

Although the question of financing appears last in this report, it is first in policymakers' minds. Since the USHealth Act was first introduced in 1986, it has always used a pay-as-you-go approach. Financing is derived from three mechanisms: revenues, cost containment, and savings associated with using the Medicare model. Savings are generated by using the Medicare model, which has a history of returning significantly more in benefits than a private insurance model, generally over 95 cents for every tax or premium dollar invested. By some estimates, following the Medicare model alone could save the nation as much as \$30 billion per year.

There are also savings generated by the cost-containment system instituted under this program. The key elements of this cost-containment system are the indexed and prospective fee-based payment system and the national expenditure cap of 12% or 13% of GNP. De-

signed to slowly, methodically, and carefully reduce health and long-term care costs over several years, this measure produces significant savings without subjecting health care providers to the uncertainties of current cost-containment systems or sharply fluctuating shifts in payments from year to year.

Although these savings make a substantial contribution to covering the cost of the program, revenues are needed to sustain it. The program begins with the funding base for health care under the existing system. First, beneficiaries are generally required to participate in cost sharing, just as most people do today, whether they are covered by the Medicare program or by private insurance. Exceptions are allowed for enrollees in HMOs, and protections are provided for the poor and near poor.

Second, revenues from the existing Medicare payroll tax and a premium approximating the Medicare part B premium are shifted into the USHealth Trust Fund. The amount of revenue from the payroll tax is increased by removing the current wage cap, making higher-income wage earners pay the payroll tax on all their wage income. Third, with respect to existing Medicaid funding, a state that wants its citizens to be part of this program is required to pay an amount that covers about half the cost of caring for the state's poor. This amount is adjusted, as in the current Medicaid program, to account for the relative wealth of different states.

A fourth revenue source is an employer tax similar to what employers would be paying for private insurance under the current system. The employer tax is a tax on total compensation and is designed to produce total revenues approximating the proportion that employers in the aggregate are paying today through private insurance.

Finally, the fifth revenue source for the program is a special dedicated USHealth tax, a surcharge that would be applied to existing corporate and individual tax liability for all taxpayers. To set the level of the surcharge, an estimate is made of the total national cost of the program and the total revenues from the sources listed above. The surcharge rate is set at a level to produce revenues to cover the difference between costs and other revenues and to ensure the continued solvency of the USHealth program.

COMMITMENT TO AND CRITERIA FOR A SOLUTION

Fortunately, there is no shortage of options to ensure care for uninsured and

underinsured Americans. There are two key questions: Is there sufficient commitment? What criteria should be used to select a solution?

In selecting a solution and its financing, it is important to keep in mind that all funding comes from the same source, the pockets of the American people, even though payment may be made through premiums, deferred wages (through employers), or taxes or out of pocket. The criteria for selecting a particular solution should be based on the most efficient and effective way to use the American people's dollars to meet the American people's health and long-term care needs.

As for whether the focus should be on piecemeal or partial solutions or a comprehensive solution, there should be little doubt as to what is needed. The passage and subsequent repeal of the Medicare Catastrophic Coverage Act demonstrated that piecemeal and partial reforms are fraught with perils. While comprehensive reform poses problems of its own, a broad-based problem exists, and only a broad-based solution will provide the full health and long-term care protection Americans desperately require.

When considering alternative proposals in the search for a comprehensive solution, a "true" solution must meet certain criteria:

- It must protect the uninsured.
- It must protect working families that are underinsured for basic, catastrophic, and long-term health care.
- It must protect people who are underinsured for catastrophic short-term care costs.
- It must protect people who are underinsured for catastrophic long-term care costs.
- It must contain health care costs for everyone (consumers, employers, and the government).
- It must ensure quality health care for everyone.
- It must be fully financed now and for the foreseeable future.

USHealth is not the only proposal that fully meets these criteria. Another proposal clearly deserving consideration is that of the Pepper Commission, which comes very close to meeting these criteria.

With good alternatives in hand, the remaining question is whether or not there is sufficient commitment to actually carry out a comprehensive and complete solution. In my view, we have no choice.

The escalating costs and the increasing unaffordability of health and long-term care for government, private in-

surance, and the general public are driving us to action and will force commitment upon us even if we cannot find it on our own. Inaction will only result in an incomplete, inadequate, and unfair health care system that we cannot afford as individuals or as a nation.

However, cost considerations should not be the only source for creating commitment. Commitment should also come from our deep concern for the plight of a large number of Americans without any health insurance coverage—31 to 37 million people are uninsured today. The fundamental right of every American to necessary health care cannot and should not be denied.

Beyond the problem of the uninsured, commitment should come from our fears of being underinsured; in other words, having inadequate coverage for primary, short-term, and long-term care. More and more of our younger and older families are likely to be working for employers who provide only minimal coverage for short-term care. With respect to long-term care, over 200 million Americans of all ages are without long-term care protection—either public or private—and are at major risk of financial disaster if hit by a catastrophic, chronic illness.

As the public opinion polls have shown time after time, Americans feel it is unacceptable that those underinsured for long-term care face not only the tragedy of severe long-term care illness but also a second tragedy—a financial disaster that strikes both young and old. Just as strongly, Americans also feel it is unacceptable that any Americans be uninsured and left to face an acute illness without the resources to retain their dignity and pay for the care.

Even in these years of tight federal budgets, this nation cannot afford to stop short of fully ensuring care for all Americans. With leadership from the public, the Congress, and the administration, this nation must make the commitment and have sufficient political will to carry through on that commitment.

If the commitment and the will are sufficient, then it is time to join our efforts, consider all the alternative solutions, make our decision, and get going on the task of building a health and long-term care system of which the United States can be proud. USHealth is one solution, a comprehensive federal program with full and free participation by the private and public sectors. It is built on the belief that this nation can and should protect and care for the uninsured and underinsured.

Liberal Benefits, Conservative Spending

The Physicians for a National Health Program Proposal

Kevin Grumbach, MD; Thomas Bodenheimer, MD, MPH; David U. Himmelstein, MD; Steffie Woolhandler, MD, MPH

The Physicians for a National Health Program proposes to cover all Americans under a single, comprehensive public insurance program without copayments or deductibles and with free choice of provider. Such a national health program could reap tens of billions of dollars in administrative savings in the initial years, enough to fund generous increases in health care services not only for the uninsured, but for the underinsured as well. We delineate a transitional national health program budget that would hold overall health spending at current levels while accommodating increases in hospital and physician utilization. Future national health program spending would be indexed to the growth in gross national product adjusted for demographic, epidemiologic, and technologic shifts. Financing for the national health program would transfer funds into the public program without disrupting the general pattern of current revenue sources. We suggest a funding package that would augment existing government health spending with earmarked health care taxes. Because these new taxes would replace employer-employee insurance premiums and substantial portions of current out-of-pocket expenditures, they would not increase health costs for the average American.

(*JAMA*. 1991;265:2549-2554)

THE AMERICAN approach to financing health care has gone awry. From physicians to patients, from The Heritage Foundation to the AFL-CIO, there is agreement that the system needs reform. But what kind of reform? Although all concur that the system is ailing, proposals diverge in their therapeutic approach. Many advocate adjust-

ments of familiar regimens: larger doses of employment-based insurance and greater infusions of public funds to expand Medicaid or to subsidize risk pools for the uninsured.¹⁻⁴ Because such measures do not confront the interdependent problems of rising costs and declining access, they cannot ensure health services to all at a cost the nation can afford. A lasting remedy requires basic restructuring of the way we pay for care.^{5,6}

The Physicians for a National Health Program plan would cover all Americans under a publicly administered, tax-financed national health program (NHP). A single public payer would replace the present array of more than 1500 private insurers, Medicaid, and Medicare. A unitary program could initially pay for expanded care out of ad-

ministrative savings without adding new costs to the overall health care budget and would establish effective mechanisms for long-term cost control. Although consolidation of purchasing power in a public agency may cause apprehension among some physicians, the program could free them from the myriad administrative intrusions that currently plague the practice of medicine.

STRUCTURE OF THE NHP

We have previously described the design of the NHP in some detail.^{7,8} It would create a single insurer in each state, locally controlled but subject to stringent national standards. States could experiment with the precise structure of the single insurer. Some may place it within a government agency, while others may choose a commission elected by the citizens or appointed by provider and consumer interests.

Everyone would be fully insured for all medically necessary services including prescription drugs and long-term care. Private insurance duplicating NHP coverage would be proscribed, as would patient copayments and deductibles. Physicians and hospitals would not bill patients directly for covered services. Hospitals, nursing homes, and clinics would receive a global budget to cover operating expenses, annually negotiated with the state health plan—based on past expenditures, previous financial and clinical performance, projected changes in cost and use, and proposed new and innovative programs. Itemized patient-specific hospital bills would become an extinct species. No part of the operating budget could be

From Physicians for a National Health Program, Cambridge, Mass (Drs Grumbach, Bodenheimer, Himmelstein, and Woolhandler); the Institute for Health Policy Studies (Dr Grumbach) and the Department of Family and Community Medicine, University of California, San Francisco (Drs Grumbach and Bodenheimer); the Department of Medicine, the Cambridge (Mass) Hospital and Harvard Medical School (Drs Himmelstein and Woolhandler); and the Public Citizen Health Research Group, Washington, DC (Dr Himmelstein). Dr Grumbach is a Pew Health Policy Fellow.

Reprint requests to Physicians for a National Health Program, 1493 Cambridge St, Cambridge, MA 02139 (Dr Grumbach).

diverted for hospital expansion, profit, marketing, or major capital acquisitions. Capital expenditures approved by a local planning process would be funded through appropriations distinct from operating budgets.

Fee-for-service practitioners would submit all claims to the state health plan. Physician representatives (probably state medical societies) and state plans would negotiate a fee schedule for physician services. The effort and expense of billing would be trivial: stamp the patient's NHP card on a billing form, check a diagnosis and procedure code, send in all bills once a week, and receive full payment for virtually all services—with an extra payment for any bill not paid within 30 days. Gone would be the massive accounts receivables and the elaborate billing apparatus that now beleaguer private physicians. Alternatively, physicians could elect to work on a salaried basis for globally budgeted hospitals or clinics, or in health maintenance organizations capitated for all nonhospital services.

COSTS OF THE NHP

To estimate total costs, we start by using the Health Care Financing Administration's projection of 1991 costs under current policies as our "baseline" figure. The Health Care Financing Administration estimates that \$567 billion will be spent on personal health care services and products in 1991, excluding nursing home costs and insurance overhead and profits (Table 1).⁹ (Although long-term care is covered by the NHP, we have omitted these costs to permit comparison with other acute care proposals.)

Universal coverage should increase the use of health services by the uninsured. According to the Lewin/ICF Health Benefits Simulation Model, approximately \$36 billion of the \$567 billion in 1991 spending projected under current policies will be accounted for by care for the uninsured, including free care at public hospitals, uncompensated care at private facilities cross-subsidized by insurance revenues, and services purchased out-of-pocket. The Lewin/ICF model estimates that an additional \$12.2 billion would be required to increase the utilization by the uninsured to levels commensurate with those of the insured (Needleman et al¹⁰ and J. Sheils, oral communication, October 1990).

The NHP will not only assist the uninsured, but will also cover services (eg, preventive) and payments (eg, deductibles) that many insurers currently exclude. Would this more extensive coverage "induce" a surge of utilization

among those currently insured? The RAND Health Insurance Experiment found that costs for persons assigned to a plan with no cost sharing were approximately 15% higher than the age-adjusted, per capita health care expenditures for the United States as a whole.¹¹ However, a more natural experiment, a study before and after the implementation of an NHP in Quebec, failed to detect the overall utilization surge predicted by the RAND experiment.^{12,13} Although the use of physician services in Quebec rose among those with lower incomes, the increase was counterbalanced by a decrease in utilization among the affluent. The net effect was convergence of utilization rates (adjusted for health status) among income groups, with no change in the overall rate.

Would an across-the-board increase in utilization be desirable? In the RAND experiment, lower-income patients with medical problems who received free care had better outcomes than those in cost-sharing plans.¹⁴ At the same time, many medical services currently provided are of no or of extremely marginal benefit,¹⁵⁻¹⁷ and it is not the intent of the NHP to inject an additional bolus of such unnecessary care into the health care system.

All these factors make it difficult to predict the level of overall utilization that would result from the NHP. For this analysis, we have added on the full \$12.2 billion cost of bringing utilization rates of the uninsured up to those of the insured. We will discuss in the "Budgeting Under the NHP" section below how the NHP budget could also accommodate increases in utilization among the currently insured.

Savings of the NHP

The administrative efficiencies of a single-payer NHP offer the opportunity for large savings during the implementation of the program.¹⁸ Providers would be relieved of much of the expense of screening for eligibility, preparing detailed bills for multiple payers, responding to cumbersome utilization review procedures, and marketing their services. In 1987, California hospitals devoted 20.2% of revenues to administrative functions,¹⁹ in contrast to 9.0% spent by Canadian hospitals (L. Raymer, Health and Welfare Canada, written communication, April 1990). (These figures exclude malpractice premium costs and administrative personnel in clinical departments such as nursing.) The 11.2% difference is attributable to Canada's simplified hospital payment method, a method we propose for the United States.

Determining the potential adminis-

Table 1.—Personal Health Care Costs for 1991, Excluding Nursing Home Care, With and Without a National Health Program (NHP), in Billions of Dollars*

	NHP	Current Policies
"Baseline" conditions	567	567
New costs for previously uninsured	12	...
Discount for 11.2% hospital administrative savings	(31)	...
Discount for 6.25% physician administrative savings	(9)	...
Subtotal: Personal Health Care	539	567
Insurance administration and profits	8†	35‡
Total Personal Health Care Plus Insurance Overhead	547	602

*This assumes Canadian-level administrative efficiency and changes in utilization only among the previously uninsured.

†1.4% of personal health care expenditures.

‡This is the amount estimated by the Health Care Financing Administration.⁹

trative savings in physician expenditures is more difficult. Although practice expenses are 49% of physician gross income in the United States and only 36% in Canada,^{20,21} it is uncertain how much of this difference is due to billing costs. Malpractice costs for US physicians, for example, are higher than those in Canada. We therefore extrapolated billing cost data from a recent American Medical Association survey to project minimum expected administrative savings in physician expenditures.²² The average physician spent approximately \$14 500 in 1988 billing Medicare and Blue Shield alone, representing 5.5% of gross physician income. In addition, physicians spent approximately 2.75% of their own professional time on billing-related activities for these claims. (The survey did not measure the costs of billing other third parties or patients and therefore yields a low estimate of physician billing costs.) We liberally estimate that physician billing expenses in Canada are 1% of physician costs and that Canadian physicians spend at the most 1% of their time on billing (D. Peachey, MD, Ontario Medical Association, written communication, June 1990). In sum, US billing costs for physician time and practice expenses are at least 8.25% of total physician expenditures in contrast to at most 2% of Canadian physician costs. An NHP functioning at Canadian-level administrative efficiency could save at least 6.25% of physician costs. Most of these savings can be realized rapidly. In the private practice of one of the authors (T. B.), for example, the change to a single payer would allow an immediate reduction in office payroll of 18%.

Administrative savings to hospitals and physicians function as price discounts when calculating costs. For example, if physicians could lower their

overhead by 6.25% of gross income by trimming billing expenses, fees could be lowered by 6.25% and physicians would still earn the same net income for the same volume of services. We therefore estimated the minimum potential administrative savings in hospital and physician expenditures to be \$40 billion by discounting projected hospital and physician costs by 11.2% and 6.25%, respectively (Table 1).

Additional savings accrue from the reduced administrative "load factor" of a public plan. In 1987, the cost of public and private insurance overhead and profits expressed as a percent of personal health care expenditures was 5.9% in the United States and only 1.4% in Canada.^{9,28} If our NHP operated with the efficiency of Canada's, the administration of health insurance would cost \$8 billion, less than one quarter the \$35 billion projected by the Health Care Financing Administration in 1991.

As indicated in Table 1, the net cost of personal health care and insurance overhead for universal coverage under the NHP, including expanded services for the previously uninsured, would be at most \$547 billion if the system operated with the administrative efficiency of the Canadian system. This is \$55 billion less than the \$602 billion that will be spent in 1991 under current policies that exclude approximately 35 million Americans.

Budgeting Under the NHP

We do not propose reducing the health care budget by \$55 billion under the NHP. As noted above, we are uncertain how utilization patterns might respond to universal, first-dollar insurance coverage. Nor can we be completely confident that hospitals and physicians will immediately shed their excess administrative poundage and assume the leaner proportions possible under a simplified payment system. We therefore propose the following budgetary strategy for the NHP: We would set the overall health care budget for the NHP's initial year at the amount projected under current policies (\$602 billion if implemented in 1991). To keep expenditures within this target, we would rely on the ability of a single payer to allocate and enforce prospective budgets for physician and hospital services. These budgets would challenge providers to extract administrative savings and redirect resources into patient care for the underserved. The budget would allow a range of utilization responses among patients and physicians.

For example, the NHP could set total hospital operating budgets at the Health Care Financing Administration

projected "baseline" 1991 level of \$273 billion (Table 2), though some individual hospitals' budgets might be adjusted to reflect past underfunding or large operating surpluses. On average, a hospital able to achieve full administrative savings would have 11.2% of its budget to devote to more or better clinical services. Billing personnel could be transferred to clinical departments to perform clerical duties, freeing up nurses for bedside care. Hospitals unable to realize immediate administrative savings would not be penalized in the short run. However, in the longer run, the single payer within each state would evaluate hospitals' clinical performance and efficiency and modify budgets, taking account of these hospital quality measures as well as community needs. The Canadian experience demonstrates that such a budgeting process need not be cumbersome or expensive, consuming less than \$2 per capita in British Columbia (D. Cunningham, British Columbia Ministry of Health, written communication, July 1990).

Prospective budgeting of physician services under fee-for-service methods would require expenditure targets or caps. On average, fees would be set at 6.25% below current levels, reflecting expected administrative savings to physicians. The expenditure target, however, could be set at \$154 billion, 6% above the "baseline" projected level for 1991 (Table 2). This would allow physician payments to accommodate a net utilization increase of up to 12.25%, sufficient to satisfy increased demand by the uninsured and underinsured, while allowing a net increase in physician income of 6%. A utilization increase above 12.25% would trigger a compensatory decrease in fees to keep expenditures within the budget target. Such a plan allows for control of costs with a minimum of the administrative waste or encumbrances of our current utilization review mechanisms.²⁴

Summing the aggregate hospital operating budget of \$273 billion, the physician budget of \$154 billion, and the other categories of personal health care spending and administration would still leave total expenditures \$18 billion below our proposed \$602 billion budget (Table 2). The \$18 billion balance could be used for start-up costs for the NHP, job training and placement programs for displaced administrative personnel, improved long-term care, and revitalized public health programs.

FINANCING THE NHP

Health insurance proposals are frequently shipwrecked on the shoals of their financing; any serious proposal

Table 2.—National Health Program (NHP) Budget, by Category of Expenditure, in Billions of Dollars

Category	NHP	Current Policies*
Hospital	273	273
Physician	154	145
Other†	149	149
Insurance administration and profits	8	35
Subtotal	584	602
New health initiatives and transition costs	18	0
Total Budget	602	602

*These are Health Care Financing Administration projections.⁹

†"Other" includes drugs, dental and other professional services, and so forth.

must specify a revenue package. Although the NHP would not result in a net increase in total health care expenditures, it would produce a major shift in payment sources toward government and away from private insurance and out-of-pocket payments. We emphasize that the average individual and business would not pay more for health care under the NHP but would pay taxes that take the place of, but do not exceed, current premium payments and out-of-pocket costs. Moreover, with the single payer's capacity to control inflation, individuals and businesses should soon enjoy reductions in the rate of increase of their health care costs.

What principle should underlie the choice of revenue sources? Health care is only one factor—sometimes a minor one—in the promotion and preservation of health. Poverty, racial oppression, substance abuse, lack of education, lack of exercise, overnutrition and undernutrition, and occupational and environmental hazards all damage health. Some of these factors can be influenced by society's revenue-generating mechanisms. For example, raising excise taxes on cigarettes and alcohol reduces their consumption and thereby improves health, particularly among teenagers and the poor.²⁵ On the other hand, burdening low-income families with high payments (whether taxes, premiums, or out-of-pocket dollars) reduces their disposable income and amplifies the ill effects of poverty. In contrast, a system of taxes and other payments that reduces the burden on low-income families without impeding job formation may ameliorate poverty's health consequences. Thus, funding mechanisms can be "healthy" or "unhealthy."

Health care financing in the United States is markedly regressive and hence unhealthy. The bottom income decile receives 1.3% of total income but pays 3.9% of health costs, while the top income decile receives 33.8% of income and pays only 21.7% of health costs. By comparison, in Britain the bottom decile

Table 3.—Public Plan's Share of 1991 Personal Health Care Expenditures Under National Health Program (NHP), in Billions of Dollars

Service	Total Cost	% Covered by NHP	NHP Cost
Hospital	273	96*	262
Physician	154	91*	140
Other	149	55†	82
New health initiatives and transition costs	18	100	18
Administration	8	85†	7
Total	602	85	509‡

*These figures are based on the public share of spending for these services in Canada. The shares are less than 100% because certain services, such as cosmetic surgery, life insurance examinations, and private room surcharges, are not covered benefits.²⁴

†These figures are based on our "best guess" estimate, since the NHP will provide more extensive coverage of nonhospital and nonphysician services than do the Canadian provincial plans. Nonprescription drugs are an example of a product in the "other" category that will not be covered.

‡A total of \$93 billion of personal health care expenditures uncovered by the NHP remain as out-of-pocket and individual private insurance premium costs.

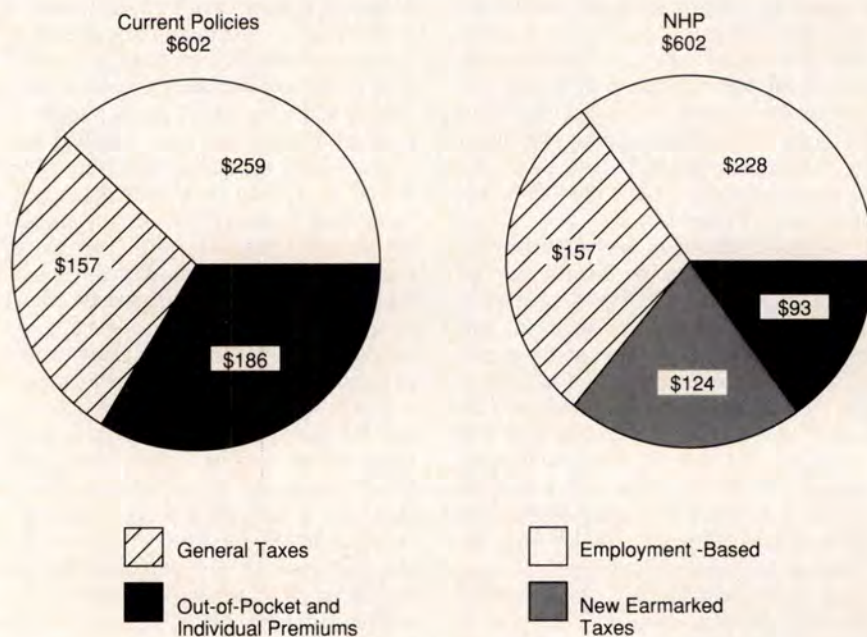
receives 2.3% of income and pays 1.7% of health costs, while the top decile receives 24.9% of income and pays 25.6% of costs.²⁶ Any departure from the existing configuration of US health care funding should reverse the current unhealthy pattern.

We estimate that public expenditures will account for 85% of health spending under the NHP, requiring \$509 billion in revenues for 1991 (Table 3). We will discuss these revenues in three categories: (1) payroll taxes, (2) general government revenues, and (3) payments by individuals (Figure).

Payroll Taxes

Employer-employee payments for group health insurance (31% of personal health expenditures [excluding nursing-home care]²⁷) are, in essence, a payroll tax,²⁸ with the money going to an insurance company or a self-insured fund rather than to the government. Social Security payments for Medicare (12% of health expenditures^{27,29}) are also a payroll tax. It is logical to combine these two sources of financing, which together account for 43% of health expenditures. To minimize economic disruption, we propose that a similar proportion of the NHP be funded by payroll tax.

The regressive nature of a payroll tax makes it a less-than-healthy revenue source; the employer share is often shifted to employees as lower wages or to consumers as higher prices.³⁰ It should be made more progressive by reducing the employee share for lower-wage employees, by raising the employee share for high-income employees (eg, eliminating the current Social Security cap), and by reducing the employer share for small business. Employers



Revenue sources. Figures are in billions of 1991 dollars. NHP indicates national health program.

and employees currently pay almost 2% of total payroll for Medicare-related Social Security taxes and approximately 10% for private health insurance—a combined health-related payroll tax of 13%.^{29,31,32} Using Department of Commerce figures, we project that under the NHP, an average tax rate of 9% for medium and large employers, with an average 2% rate for employees, and half these rates for businesses with fewer than 20 employees, would raise \$228 billion in revenues.³³ These precise tax rates are only initial suggestions and must be negotiated with the affected parties.

General Government Revenues

Twenty-six percent of personal health expenditures (excluding nursing-home care) comes from non-Social Security governmental revenues at the federal, state, and local levels.^{27,29} Of this total, 51% comes from individual income taxes, 12% from property taxes, 12% from sales taxes, 12% from corporation income taxes, 5% from gasoline, tobacco, and alcohol taxes, and 8% from other sources.³⁴ Although some of these revenue sources are unhealthy, we propose leaving them intact, adhering to the principle that implementing the NHP should not demand radical economic restructuring. These revenues would generate \$157 billion for the NHP in 1991.^{9,29}

Payments by Individuals

The third major source of health financing consists of payments by individuals; these payments currently account for 31% of health expenditures (5% in individual insurance premiums, 24% in out-of-pocket payments, 1% in Medicare premiums, and 1% in other private funds).^{27,29} They are the least healthy revenues because they burden lower-income families far more than they do the affluent. To the extent that they pay for services covered under the NHP, they will disappear.

We propose replacing the majority of individual payments with "healthier" revenues—taxes that reduce income disparities and discourage the use of harmful and polluting substances. The following measures, according to a Congressional Budget Office study,³⁵ would generate \$124 billion per year and could be considered as NHP tax revenue sources: (1) a new federal income tax bracket of 38% for families with income higher than \$170 000, (2) a cap on mortgage interest deductions for luxury homes, (3) a 0.5% tax on transfer of securities, (4) an increase in energy taxes to encourage energy conservation and reduce pollution, (5) an increase in excise taxes on cigarettes to 32 cents per pack and on alcohol to 25 cents per ounce, (6) an excise tax on sources of air and water pollutants, and (7) a tax on

fossil fuels to reduce carbon dioxide emissions. Although some of these taxes are regressive, their overall effects are health promoting.

To summarize, the NHP would fund approximately 38% of health expenditures from a payroll tax similar to current payroll expenses for Medicare and health insurance premiums; 26% from existing federal, state, and local revenues; and 21% from new, healthy federal tax revenues that would largely supplant current out-of-pocket expenditures. Fifteen percent of expenditures would remain out-of-pocket (Figure).

A majority of Americans would accept this type of tax package if it were earmarked for health care and placed in a health care trust fund. A 1990 poll found that 72% would support an NHP even if it required a tax increase; however, only 22% would pay more than \$200 extra per year.³⁶ Our proposal would not increase the sums paid for health care by low- and middle-income groups. It is designed to minimize winners and losers, aside from the private health insurance industry.

Two additional principles should be incorporated in NHP funding. Per capita health spending should be equalized throughout the nation, with federal funds transferred to states under formulas adjusted for age, income levels, health status, wage, and other input costs. Finally, to protect the NHP from annual budgetary debacles in Washington, DC, it must be an entitlement program with a statutory expenditure floor as well as a ceiling. In contrast to entitlement programs restricted to poor families, the NHP would embrace the entire population and could thus command the level of support enjoyed by Social Security. Adequate increases in NHP funding (based on such factors as aging of the population, epidemics, advances in medical technology, and inflation) must be mandated by law. As suggested in our original NHP proposal,⁷ an expanded program of technology assessment would help guide budgetary allocations.

COMMENT

In health insurance, as in many things in life, simplicity is a virtue. The NHP's approach to universal access is simple: every American automatically qualifies for equal, comprehensive health insurance under a unitary public plan. The economic premises of the NHP are also simple: funnel all third-party payments through a single payer, thereby saving billions of dollars in administrative costs and achieving cost containment through global controls rather than minute bureaucratic scrutiny.

The administrative cost reductions during the NHP's initial phase are not, as some have argued, only a one-time saving.³⁷ Whether in Canada or New Zealand, Sweden or Britain, single-payer systems have stabilized costs in the past decade, while US health care inflation has been impervious to the most earnest attempts to control costs.³⁸⁻⁴⁰ Economist Robert Evans⁴¹ has concluded that "universality of coverage and sole-source funding are, as far as we know now, preconditions for cost control."

Global expenditure control can also enhance clinical freedom. Under the micromanagement model of cost containment, each of the multiple payers, lacking global budgetary levers, resorts to intrusive patient-by-patient utilization review.²⁴ Such day-to-day interference in medical practice is minimized in single-payer systems.⁴⁰ As John Wennberg¹⁶ recently observed:

The key to the preservation of fee-for-service markets, as the Canadians seem to recognize, is not the micromanagement of the doctor-patient relationship but the management of capacity and budget. The American problem is to find the will to set the supply thermostat somewhere within reason.

The NHP would benefit most Americans, though a few powerful interest groups would suffer. It would virtually eliminate financial barriers to care for those who are currently uninsured and underinsured, ensure patients a free choice of providers, ensure physicians a free choice of practice settings, diminish bureaucratic interference in clinical decision making, stabilize health spending, and reduce the growing burden of health care costs for many individuals and employers. Small-business owners who do not currently cover their employees would face modest cost increases, though far less than mandated by most alternative proposals. The health insurance industry would feel the greatest impact. Indeed, most of the extra funds needed to expand care would come from eliminating the overhead and profits of insurance companies and from abolishing the billing apparatus necessary to apportion costs among the various plans. Job retraining programs for displaced administrative and clerical personnel would be essential.

Although few dispute the ability of the NHP to provide universal coverage and control costs, critics have raised the specter of rationing, pointing to queues for some high technology services in Canada.⁴² We do not advocate cutting US health spending to Canadian levels. Even with a slower rate of growth under the NHP, US health expenditures will remain well above those of any

other nation. Deploying our greater resources with Canadian efficiency would permit increases in utilization and improvements in technology without skyrocketing costs. Compared with Americans, Canadians do, in fact, get more health care for their health care dollar. About half of the cost differential between the two nations is squandered on insurance overhead and paper pushing.^{18,43} Stanford economist Victor Fuchs⁴⁴ has concluded that "the quantity of [physician] services per capita is much higher in Canada than in the United States . . . the data firmly reject the view that Canadians save money by delivering fewer services."

Health financing reforms unable to extract administrative savings inevitably impose added costs for expanded services. Employer mandate proposals (eg, the Pepper Commission Plan,¹ the American Medical Association's Health Access America plan,³ the National Leadership Commission's proposal,² and Massachusetts' Universal Health Care Law [*New York Times*, April 11, 1991:A1]) would leave existing insurance in place while expanding public programs for the unemployed and requiring employers to insure their workers. None of these plans offer improved coverage for those currently insured, nor do they offer new cost control mechanisms. Hence high initial costs presage continuing inflation or far more stringent and intrusive micromanagement—probably both. Modifications of the employer mandate approach (eg, the UNYCare proposal in New York State)⁴⁵ that attempt to meld the cost containment features of a single-payer system with a continuing role for private insurance also eschew most administrative savings, compromising the ability of such measures to expand access without raising costs.

There is slim evidence that Enthoven and Kronick's⁴⁶ "managed competition" plan—featuring competing managed care insurers and higher patient copayments—can hold costs in check.⁴⁷ Does forcing consumers to bear premium costs for higher-priced plans hold down overall costs or simply segregate the market based on ability to pay? Do low-cost plans provide care more efficiently or simply market themselves more effectively to lower-risk subscribers? Is the rubric "Consumer Choice Health Plan" appropriate for a system likely to lock the vast majority of patients and physicians into closed panel health maintenance organizations run by insurance companies? The ultimate vision of managed competition—a landscape dominated by a limited number of huge health maintenance organizations man-

aging salaried physicians—is a more radical departure from the current health care scene than the NHP.

The objectives of the NHP are simple: (1) to minimize financial barriers to appropriate medical care, (2) to distribute costs fairly, and (3) to contain costs at a

reasonable level. Once a structure is in place for meeting these basic concerns, the medical profession and society as a whole can move on to the more complicated questions: Which health services truly improve the quality of life? What share of our human and material re-

sources should we devote to health care? How shall we reduce the toll now extracted by poverty, ignorance, and addictions? By implementing a national health program, we can turn and face the challenges ahead.

References

1. US Bipartisan Commission on Comprehensive Health Care. *A Call for Action*. Washington, DC: The Pepper Commission on Comprehensive Health Care; 1990.
2. National Leadership Commission on Health Care. *For the Health of a Nation*. Ann Arbor, Mich: Health Administration Press; 1989.
3. *Health Access America*. Chicago, Ill: American Medical Association; 1990.
4. Kennedy E. Senate Bill S.768. November 20, 1989.
5. Woolhandler S, Himmelstein DU. Resolving the cost/access conflict: the case for a national health program. *J Gen Intern Med*. 1989;4:54-60.
6. Grumbach K. National health insurance in America: can we practice with it? can we practice without it? *West J Med*. 1989;151:210-216.
7. Himmelstein DU, Woolhandler S. A national health program for the United States: a physicians' proposal. *N Engl J Med*. 1989;320:102-108.
8. Woolhandler S, Himmelstein DU. A national health program: a northern light at the end of the tunnel. *JAMA*. 1989;262:2136-2137.
9. Health Care Financing Administration. National health expenditures: 1986-2000. *Health Care Financing Rev*. 1987;8(4):1-36.
10. Needleman J, Arnold J, Sheils J, Lewin LS. *The Health Care Financing System and the Uninsured*. Washington, DC: Lewin/ICF; 1990.
11. Newhouse JP, Manning WG, Morris CN, et al. Some interim results from a controlled trial of cost sharing in health insurance. *N Engl J Med*. 1981;305:1501-1507.
12. Enterline PE, Salter V, McDonald AD, McDonald JC. The distribution of medical services before and after 'free' medical care: the Quebec experience. *N Engl J Med*. 1973;289:1174-1178.
13. McDonald AD, McDonald JC, Salter V, Enterline P. Effects of Quebec Medicare on physician consultation for selected symptoms. *N Engl J Med*. 1974;291:649-652.
14. Brook RH, Ware JE Jr, Rogers WH, et al. Does free care improve adults' health? results from a randomized controlled trial. *N Engl J Med*. 1983;309:1426-1434.
15. Eisenberg JM. *Doctors' Decisions and the Cost of Medical Care*. Ann Arbor, Mich: Health Administration Press; 1986.
16. Wennberg J. Outcomes research, cost containment, and the fear of health care rationing. *N Engl J Med*. 1990;323:1202-1204.
17. Chassin MR, Koseoff J, Park RE, et al. Does inappropriate use explain geographic variations in the use of health care services? *JAMA*. 1987;258:2533-2537.
18. Himmelstein D, Woolhandler S. Cost without benefit: administrative waste in US health care. *N Engl J Med*. 1986;314:441-445.
19. *Aggregate Hospital Financial Data for California: Report Periods Ending June 30, 1987-June 29, 1988*. Sacramento: California Health Facilities Commission; 1989.
20. Gonzalez ML, Emmons DW. *Socioeconomic Characteristics of Medical Practice*. Chicago, Ill: American Medical Association; 1988.
21. Iglehart J. Canada's health system faces its problems. *N Engl J Med*. 1990;322:562-568.
22. American Medical Association. The administrative burden of health insurance on physicians. *Socioeconomic Monitoring Survey Rep*. 1989;3:2-4.
23. *National Health Expenditures*. Ottawa, Ontario: Health and Welfare Canada; 1990.
24. Grumbach K, Bodenheimer T. Reins or fences? a physician's view of cost containment. *Health Aff*. 1990;9(4):120-126.
25. Last JM. Controlling the smoking epidemic. *Am J Prev Med*. 1985;1:1-3.
26. Wagstaff A, Van Doorslaer E, Paci P. Equity in the finance and delivery of health care: some tentative cross-country comparisons. *Oxford Rev Econ Policy*. 1989;5:89-112.
27. Levit KR, Freeland MS, Waldo DR. National health care spending trends: 1988. *Health Aff*. 1990;9(2):171-184.
28. Reinhardt UE. Health insurance for the nation's poor. *Health Aff*. 1987;6(1):101-112.
29. Levit KR, Freeland MS, Waldo DR. Health spending and ability to pay: business, individuals, and government. *Health Care Financing Rev*. 1989;10(3):1-11.
30. Pechman JA. *Federal Tax Policy*. Washington, DC: The Brookings Institution; 1987.
31. Bergthold LA. *Purchasing Power in Health*. New Brunswick, NJ: Rutgers University Press; 1990.
32. DiCarlo S, Gabel J. Conventional health insurance: a decade later. *Health Care Financing Rev*. 1989;10(3):77-89.
33. Bureau of the Census. Statistical abstract of the United States 1990. Washington, DC: US Dept of Commerce; 1990.
34. Bureau of the Census. *Quarterly Summary of Federal, State, and Local Tax Revenue, July-September 1989*. Washington, DC: US Dept of Commerce; 1990.
35. Congressional Budget Office. *Reducing the Deficit: Spending and Revenue Options*. Washington, DC: The Congress of the United States; 1990.
36. Blendon RJ, Donelan K. The public and the emerging debate over national health insurance. *N Engl J Med*. 1990;323:208-212.
37. Aaron H, Schwartz WG. Rationing health care: the choice before us. *Science*. 1990;247:418-422.
38. International comparisons of health care financing and delivery: data and perspectives. *Health Care Financing Rev*. 1989;10(suppl):1-196.
39. Pfaff M. Differences in health care spending across countries: statistical evidence. *J Health Polit Policy Law*. 1990;15:1-24.
40. Evans RG, Lomas J, Barer ML, et al. Controlling health expenditures: the Canadian reality. *N Engl J Med*. 1989;320:571-577.
41. Evans RG. Accessible, acceptable, and affordable: financing health care in Canada. In: *The 1990 Richard and Hinda Rosenthal Lectures*. Washington, DC: Institute of Medicine; 1990:7-47.
42. Board of Trustees, American Medical Association. *Study of the Canadian Health Care System*. Chicago, Ill: American Medical Association; 1989. Report V(A-89).
43. Evans RG. Split vision: interpreting cross-border differences in health spending. *Health Aff*. 1988;7(4):17-24.
44. Fuchs VR, Hahn JS. How does Canada do it? a comparison of expenditures for physicians' services in the United States and Canada. *N Engl J Med*. 1990;323:884-890.
45. Beauchamp DE, Rouse RL. Universal New York Health Care: a single-payer strategy linking cost control and universal access. *N Engl J Med*. 1990;323:640-644.
46. Enthoven A, Kronick R. A consumer choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy. *N Engl J Med*. 1989;320:29-37, 94-101.
47. Jones SB. Can multiple choice be managed to constrain health care costs? *Health Aff*. 1989;8(3):51-59.

The Health Security Partnership

A Federal-State Universal Insurance and Cost-Containment Program

Rashi Fein, PhD

The Health Security Partnership attempts to assure (1) that all Americans have insurance coverage for a set of comprehensive health care benefits, (2) that cost-containment issues are addressed in a manner that does not impinge negatively on the quality of care, and (3) that provider freedom to deliver appropriate clinical care is strengthened. It assigns important responsibilities to the federal government (eg, specification of benefits, review of proposed state health care budgets), while permitting states to select, develop, and administer specific program design features they deem appropriate (eg, states could build on and expand the existing health system infrastructure, including private insurance, and/or extend the role of tax-supported programs). It is estimated that in its first year the program would add about 5% to America's health expenditures, but within a few years, cost-containment efforts and administrative efficiencies would reduce overall expenditures below what they otherwise would be.

(JAMA. 1991;265:2555-2558)

PATIENTS, providers, and private and public payers who encounter the American health care system face increasing difficulties. The Health Security Partnership, developed by a multidisciplinary technical committee of the Committee for National Health Insurance, attempts to deal with a number of those problems. It specifically addresses the issue of equitable access for the uninsured and underinsured and establishes mechanisms to make certain that all Americans have insurance for a set of core benefits. It specifically addresses the issue of expenditure control and establishes mechanisms to help contain

health care expenditures without impinging negatively on quality. As an important corollary, it eschews the micro-management of clinical care and affords providers and patients greater freedom in exercising clinical choices.

Some may consider it unnecessary to address these multiple goals at the same time and within the same program. I believe that we cannot solve either the access or the cost problem by itself. The enactment of legislation to attain one goal (but not both) would prove to be an unstable "solution." The reader need only consider what would happen to access without expenditure control—surely history suggests the outcome would be cutbacks in coverage and benefits, increased emphasis on "utilization review," and stronger efforts to control the behavior of individual patients and providers. Similarly, imagine

expenditure control without insurance protection—surely, in the long run, such controls would not be perceived as impinging equitably on all population groups (and in fact would not do so), leading to pressures to ease cost controls to expand access. Furthermore, in both cases, providers would be criticized for presumed failure to provide services to all and/or to control costs.

Thus, we must develop a comprehensive program. This should not surprise us; one of the important lessons of the last quarter century is that the various parts of the health care sector are interrelated. It is reasonable to suggest that, the more broad and comprehensive the approach, the greater the opportunities for individuals and organizations with differing priorities to negotiate their differences. Without a broad agenda that enables the kinds of compromise that might provide some "gains" for each of the many participants in the health sector, the historical gridlock will continue.

Although the Health Security Partnership proposal is very detailed and has been "translated" into legislative language, space constraints require that this presentation be limited to the salient features and descriptors. Before explaining the proposal, I note that, although it is not presented in this review, the proposal has a phased long-term-care component. I also note that the proposal does not fold in Medicare (until 5 years have elapsed and the program has demonstrated its administrative and operational effectiveness).

From the Department of Social Medicine, Harvard Medical School, Boston, Mass.

Reprint requests to Department of Social Medicine, Harvard Medical School, 643 Huntington Ave, Boston, MA 02115 (Dr Fein).

LEVEL OF ADMINISTRATIVE RESPONSIBILITY

The plan calls for a partnership between the federal government and the various states. It is reasonable to ask why a group of individuals who, in earlier years, looked to the federal government to develop and administer programs designed to address national health care and insurance problems have shifted to the concept of a partnership with specific responsibilities delegated to various levels of government. Given the potential variation in state programs and in state administrative capacities, why risk horizontal inequities for residents in different jurisdictions?

I believe the answer can be generalized and should help guide the development of any plan. Today's health care system is very different from the one that existed as recently as the early or even late 1970s, when universal health insurance was most recently discussed actively. Today's state health care delivery systems are much more heterogeneous (eg, there is greater variation in the proportion of residents enrolled in prepaid group practices, independent practice associations, and preferred provider organizations). As a consequence, it is appropriate that different parts of the country structure payment, enrollment, and cost-containment mechanisms differently to suit their demographic and economic conditions and the organization of their health sectors. In addition, the committee believed that population groups residing in different parts of the nation and with different cultural traditions should have mechanisms to directly influence the priorities of the health system they encounter. Furthermore, some states have developed strong administrative competence on matters such as enrollment, rate setting, and cost containment. Those capacities should be used. Finally, we have placed major responsibilities at the state level because we agree with Justice Brandeis' view that the states should serve as the nation's experimental laboratories.¹ There is merit in providing the opportunity to learn from the different experiences of the various states. Our plan reflects the view that, like politics, health care services are local, and both citizenship and medical care are enhanced by bringing decisions closer to the people.

We believe these are compelling arguments. Nevertheless, we recognize that, compared with a purely federal program, a state-based approach does entail additional complexity—attaining interstate equity requires that federal financial assistance formulas adjust for

differences and cyclical variations in state economies, fiscal resources, and health care needs. Such formulas would also have to take account of existing differences among the states in health care prices and costs, although this should be done in a manner that, over a period of time, would help reduce these variations. We expect that, as the various states learned from each other's experiences, health systems would gradually converge. Even so, a state-based program does imply that existing complexities now faced by national employers would not be fully eliminated. Our judgment is that the gains of state administration far outweigh these difficulties.

FEDERAL AND STATE RESPONSIBILITIES

The proposal provides a precise outlining of governmental responsibilities and allows freedom for individual states to meet their responsibilities through mechanisms and measures they deem appropriate. Although this means that states will have the freedom to make mistakes, it also means that the nation will have a "diversified portfolio" of programs, reducing the risk of widespread error. Because there are likely to be many different programs, it is impossible to describe how the program will work. Nevertheless, it is possible to suggest what the typical state approach might be and how it would operate.

The federal government would define the basic or core benefits that would apply to all the states. This would provide equity among the states and would eliminate interstate competition (individual states would be permitted to add benefits to the core). The proposal has carefully defined these benefits, which include necessary medical services provided by physicians and hospitals, in-hospital drugs, and preventive services. Federal authorities would certify that a state has 95% of its residents enrolled in private or public health insurance programs that provide the defined benefits. States would have to cover their residents even when they were out of state and would have to meet a limited number of additional criteria that relate to such matters as maximum limits for individual cost sharing, adoption of approved cost-containment programs, and development of state health care budgets. In general, states would remain free to implement state-developed programs, and federal certification would not require that states adopt a federally prescribed approach. When the state program has been certified, the state would receive federal financial assistance at a predetermined level.

This assistance, which would increase over time but at a rate not to exceed the growth in the gross national product, would encompass (and add to) existing funding for medical care services now provided under Medicaid and various other federal and federal/state health service programs. The federal government would undertake technology assessment and the study of treatment effectiveness and would disseminate the findings for review and action by the states.

State governments would design and administer their own programs. They would decide on mechanisms to assure enrollment of individuals and families and to generate the requisite funds. A majority of states would probably develop programs that would mandate employers to contribute to health insurance for their employees (with appropriate subsidies for part-time employees and small and low-income employers) and that would reach other uninsured and underinsured individuals with new insurance programs sponsored by the state and funded through state tax mechanisms. I stress the word *insurance*, for the plan does not rely on an expansion of Medicaid (indeed, except for long-term care, Medicaid would be subsumed under the partnership) or the support or creation of programs to fund uncompensated care. Rather, the Health Security Partnership is designed to provide financial protection to enrolled individuals and full payment to providers through insurance, encouraging health care providers to treat all citizens the same, regardless of income.

Because legislators seem to be averse to shifting private financing to governmental budgets via increased taxes, at the outset, it is likely that most states would opt for mandating and "gap filling." Nevertheless, the proposal does permit states to use taxes as well as premiums as a funding source. It would be advantageous if a number of states were to do so, providing information on possible efficiency gains and dollar savings.

The plan permits state political and legislative processes to determine the roles that insurance companies would play in underwriting and as fiscal intermediaries, the level (within an upper limit) of cost sharing, the specific fee structure for physician payment, and prospective budgets for institutional providers. Even so, the need for equitable treatment for all Americans and the imperatives of cost containment necessitate a limited number of national standards or requirements. These include (1) the adoption of state health budgets, with federal review; (2) the determina-

tion of insurance premiums, if any, on the basis of community rather than experience rating; (3) a ban on balance billing; and (4) an emphasis on consumer participation in policy development as well as on adequate grievance procedures for patients and providers. I stress the importance of the move from experience rating, and, perforce, from self-insurance. Without the adoption of a broad community perspective, rapid advances in testing procedures, enabling increasingly refined estimates of an individual's future need for health care, will lead to increases in employment discrimination as employers and employees seek to distance themselves from potential high utilizers.

THE ROLE OF PRIVATE INSURANCE

The Health Security Partnership permits individual states to determine the role they deem appropriate for private insurance and to use private insurers (and, indeed, even to expand their role). It is likely that in most states insurers would retain their present role as fiscal agents (although there is likely to be a decline in the number of companies operating within a state as well as in insurance marketing expenditures). Competitive advantages would accrue to those insurers that developed and sponsored managed care programs and capitated health care delivery systems, increasing their ability to restrain outlays and stay within their budgets. Individual states can be expected to standardize claim and payment procedures to provide relief for patients and physicians (as well as other care providers) from the present process, which can be onerous, time-consuming, costly, complex, and confusing. The combination of a state health care budget, continued movement to capitated funding and similar fixed-budget arrangements, and negotiated fee schedules and prospective payment systems will create a new environment within which health insurers will function. This environment is designed to increase system efficiency. Given increased governmental concern with quality and efficacy of treatment, more attention will be directed to "buying" than "paying for" care. Those who finance care should do more than simply write checks and pay bills; they should adopt a buyer's philosophy and ask whether the bill (and the associated procedure) has merit and is justified.

FINANCING

Federal, state, tax, and premium funds would flow into a single state-designated agency. In states that retain private insurers to administer claims, individuals or groups would enroll, as at

present, as subscribers with a particular insurer they felt would administer the dollars that flow in their behalf efficiently, enabling program savings and possible additional benefits or reductions in cost sharing. In turn, funds in support of individual or group subscribers would flow from the single agency to the designated insurers or delivery systems on a capitated basis, adjusted primarily by age and gender. The development of more reliable data than are currently available would also make it possible to adjust the capitation rate for other influences on anticipated medical expenditures, reducing the incentive to dump subscribers who are viewed as poor health care risks.

Three important benefits are associated with the extra step in the flow of funds. (1) No insurer or deliverer of care would know the source or mix of private or government-assisted funding on behalf of an individual subscriber or family unit. (2) All funds would be commingled, and this could become part of the mechanism for raising funds in support of subsidies for individuals who could not pay or whose employer could not pay the full costs of health insurance. (3) This structure makes possible a more precise tracking of the size and sources of total health care expenditures within a state, a requirement for careful budgeting.

We believe that, in a system based on community rating, it is useful to permit collectively bargained premium dollars to follow groups of employees. The sharing of savings associated with efficiencies in delivery of care would encourage individuals and their employers to continue efforts to reduce the need for health care interventions and to reduce the costs of care. This design would replace today's efforts at cost shifting with incentives stressing occupational safety and health, prevention and wellness programs, and research to assure "value for money" as well as earlier augmentation of phased long-term-care benefits and reductions in cost sharing.

The plan does not require the elimination of deductibles or coinsurance. While the committee did not view cost sharing as an important contributor to cost-containment efforts and agreed that cost sharing added complexity and administrative costs (while impinging negatively on equity), we left cost-sharing decisions to the states. We recognized that eliminating cost sharing would require shifting considerable sums from individual subscribers to premiums or taxes. It would also add considerably to the revenues needed for the Medicare program (since it would hardly make sense to retain cost sharing for those over 65 years and for the dis-

abled while erecting a program without deductibles and coinsurance for the population under 65 years. Equity considerations nonetheless impelled us to circumscribe the extent of cost sharing and limit its potential unfavorable impact. We set annual limits on individual (\$200) and family (\$500) deductibles, on coinsurance rates (20%), and on total out-of-pocket expenditures (\$2500 per family). Furthermore, patient payments would be eliminated for persons below the poverty line as well as for prenatal and postnatal and well-baby care services provided to individuals in families with incomes below 150% of poverty.

COST CONTAINMENT

The plan attempts to constrain the escalation of health expenditures through various mechanisms: the adoption of national and state health care budgets—a measure that will require *ex ante* consideration of levels of spending, trade-offs, and willingness to pay; prospective negotiated budget payment for institutional providers; adoption of negotiated, resource-based relative value fee levels; continued expansion of capitated payment systems; savings on administrative costs associated with marketing, enrollment, claims handling, and reimbursement; and expansion of federal and state efforts in the areas of technology and treatment effectiveness. As a consequence of these features and of the limits on annual increases in the federal contribution, health expenditures within a state could continue to increase rapidly and as a percentage of the gross national product only if the electorate and its representatives made a deliberate decision that they favored and were prepared to pay for such increases. We expect the need for explicit decisions to help restrain costs.

REQUISITE FUNDS

Under the Health Care Partnership, new funds would be required to finance care for persons who would receive more care than at present (existing hospital and ambulatory utilization patterns by the uninsured and underinsured must be taken into account). Furthermore, these new demands may add inflationary pressures to parts of the system because, although the nation has enough physicians and hospital beds, services are delivered not nationally but locally. Over time, savings on administrative expenditures and as a consequence of cost-containment efforts would offset new service costs and inflationary price increases for existing services. Projections of expenditures, therefore, are heavily dependent on assumptions about the willingness of gov-

ernment negotiators to engage in hard bargaining. Cost-containment efforts would likely be more vigorous and effective if providers attempted to capture large increases in income, particularly if these increases in income were associated with "windfall" inflationary price increases.

The committee estimates that implementing the suggested federal definition of core benefits would lead to an increase of about 5% in US personal health care expenditures in the program's first year. This derives from a 6% increase in hospital care (but, because marginal costs are less than average costs, a smaller percentage increase in hospital revenues) and a 15% increase in physician services (associated with a 10% increase in physician incomes). This would add \$30 billion to \$35 billion in health care expenditures. Of course, it is impossible to be more precise, because the various states would be free to design their own enrollment and financing programs.

The committee suggests that one third of this increase (about \$10 billion) come from the federal government, one third from state governments, and one third from private sector contributions to the purchase of health insurance. The federal contribution could come from any of a number of special taxes or combinations of taxes (eg, excise taxes, "sin" taxes, payroll taxes, or income-tax surcharges). State contributions would likely rely on expansion of traditional state sources of revenue. Depending on the nature of the state program, private costs would be met through premiums or taxes. The ratios and associated dol-

lar amounts would be altered in states that adopted a comprehensive tax-based financing mechanism.

Future increases in expenditures would be moderated by cost-containment efforts and would be offset, in part, by administrative savings. As a consequence, after a one-time jump, the expenditure trend line would flatten out and diverge from present trends. After a few years the nation would be spending less than would otherwise be the case. The powerful impact of reductions in the rate of increase in personal health expenditures is illustrated by the observation that, if the present trend were lowered by 3 percentage points, annual savings would be \$18 billion to \$21 billion, implying a "crossover" in only 2 years. Even a modest reduction of 1 percentage point would imply that, within a decade, the nation would be spending less than if present trends continue unchanged.

In assessing the Health Security Partnership proposal, four important considerations should be kept in mind.

1. America's health care financing is changing and will continue to do so. Our choice is whether to adopt programs that help the nation attain a set of inter-related goals or to intervene on an ad hoc, emergency, and crisis basis as the insurance system continues to come apart and as expenditures continue to escalate. Anything less than a comprehensive approach is not likely to be effective.

2. It is necessary to address universal coverage and expenditure control at the same time. Only in this way can we achieve a politically stable but evolving

and flexible program. Furthermore, only a comprehensive approach will help physicians and other care givers regain important aspects of clinical freedom and remove themselves from a role they do not seek and that is inappropriate to their profession: that of gatekeeper and resource allocator, whose clinical decisions are guided by insurance coverage and ability to pay rather than by medical need.

3. A number of states are considering or developing legislation to address universal access issues. Since it will not be possible for all states to "go it alone," federal legislation is required if the goal of universal coverage for *all* Americans is to be attained. Nevertheless, state efforts and programs will increase the probability of federal action.

4. The American political process is one of compromise. The Health Security Partnership proposal fits within that process. It relies on state efforts, assuring both compromise and diversity. Furthermore, it has a number of parts and characteristics that can be altered without jeopardizing the integrity of the program. It is not a "take it or leave it" program. It recognizes existing relationships and the existing health care financing infrastructure. It also recognizes political forces and attempts to develop a "realistic" program. Those who read the current scene differently are invited to offer their comments and modifications.

Reference

1. Urofsky MI. *Louis D Brandeis and the Progressive Tradition*. Boston, Mass: Little Brown & Co Inc; 1981.

Beyond Universal Health Insurance to Effective Health Care

Eli Ginzberg, PhD, Miriam Ostow, MA

NO ONE, least of all an economist, needs to be persuaded that people who lack money or health insurance are likely to encounter difficulties in obtaining essential health care services. On the other hand, the economist has an obligation to explain that the adoption of a system of universal coverage will not, *ipso facto*, translate into assured access for essential, much less optimal, health care for those who are currently disadvantaged. The reasons that universal coverage will not necessarily guarantee effective services to all are embedded in the nature and characteristics of the health care system.

In developing this argument and its policy implications, we will undertake a threefold analysis, including (1) a selective review of health care financing reforms in the United States, (2) an explanation of nonfinancial barriers to effective health care, and (3) a delineation of the range of interim policy interventions required to lower the barriers to access.

LESSONS FROM HISTORY

The first large-scale governmental reform of the US health care system in the post-World War II era involved the radical restructuring of the medical services of the Veterans Administration, now renamed the Department of Veterans Affairs. In recent years, the Department of Veterans Affairs, the nation's largest medical system, consisting of about 170 hospitals and significant numbers of adjunct facilities including ambulatory care clinics and nursing homes that provide long-term care, has been operating at an annual budget in the \$10 billion range. Congress has stipulated the categories of patients that the Veterans Affairs De-

partment is mandated to treat as well as those whose care is discretionary, depending on the availability of resources.

The ease of access and the quality of treatment received by veterans with preferred eligibility depend on such considerations as the location of the veterans' hospital nearest to their place of residence and whether the hospital is affiliated with a medical school that has assumed principal responsibility for the operation of its professional services.¹

For many decades New York City has operated a major health and hospital system with a current budget of about \$2.5 billion that has been committed to providing care to everyone, regardless of ability to pay. Accordingly, New Yorkers may be said to have had "universal coverage" for almost a century. Consider, however, the following quotation from a recent report of the state comptroller:

HHC [the Health and Hospitals Corporation of New York] is faced with severely overcrowded conditions stemming from significant increases in AIDS, psychiatric, and drug-abuse patients; a lack of available discharge options for patients occupying acute care beds unnecessarily; and bed closings due to shortages of key staff such as nurses and social workers.²

The most ambitious financial reform that the nation has undertaken dates from 1965 when Congress passed Medicare and Medicaid with the intention of ensuring broad access to care for the elderly and the categorical poor (recipients of Aid to Families with Dependent Children). What does the subsequent record reveal? Unquestionably, the large-scale infusion of federal, state, and, in the case of Medicaid, some local governmental funds resulted in much improved access of the elderly and the poor to both short-term inpatient care and ambulatory services. Furthermore, with the passage of Medicare, most of the elderly were able to turn for their short-term care needs to mainstream

practitioners and voluntary hospitals.

Although it was widely believed that Medicaid would be a first step for the poor to gain access to mainstream medicine, that expectation has not been borne out. On the positive side, successive surveys conducted by The Robert Wood Johnson Foundation (Princeton, NJ) in the years 1976, 1982, and 1986 found that the new financing efforts contributed a great deal to increasing the number and range of health services available to the poor and the uninsured.³ However, there are important negatives that should be identified in the context of the resurgent belief that financial reform by itself, possibly at last in the form of universal coverage, will result in access to effective health care for all. The following have been some of the principal shortfalls of Medicaid in fulfilling the expectations of its proponents:

- Despite the willingness of the federal government to cover up to 78% of the Medicaid costs of low-income states, many states have resisted the incentive. From the mid-1970s to the mid-1980s, the proportion of poor persons covered declined from two of three to two of five, with some reversal in the last years as Congress has forced the states to expand coverage for pregnant women and young children.⁴

- Faced with steeply rising Medicaid costs, various states have arbitrarily limited the number of physician visits, days of hospitalization, and number of prescriptions for which they provide reimbursement. In many states, reimbursement rates for physician visits and payment for hospital care have been set so low that a large segment of the provider community has avoided accepting Medicaid patients or has severely limited the number of Medicaid recipients treated.

Medicare came closer to fulfilling the expectations of its advocates and the legislators who passed the program, but

From the Eisenhower Center for the Conservation of Human Resources, Columbia University, New York, NY.

Reprint requests to the Eisenhower Center for the Conservation of Human Resources, Columbia University, New York, NY 10027 (Dr Ginzberg).

it too revealed discrepancies between financing reform and effective access that are worth noting: no one contemplated that over 70% of Medicare enrollees would resort to supplemental private insurance (Medigap) to improve their coverage. Nor did Congress anticipate that Medicare enrollees would balk at covering half of the premium costs for Medicare B, placing an unexpected new burden on federal financing. In 1988, Congress sought belatedly to relieve the elderly of some of the catastrophic costs of hospital care and prescription drugs through Medicare, only to have to rescind the amendments a year later in the face of a voter revolt against the higher premiums and taxes that these reforms entailed.

The burden of this review underscores that even large-scale financing reforms aimed at increasing coverage do not automatically translate into broadened access and improved services. After some years, federal and state governments often encounter budgetary stringencies that impel them to retrench in covering costs, to decertify persons who had previously been enrolled, and to place limitations on eligibility and benefits. The lessons extracted from the experience of earlier health care reforms should not be overlooked in the debate over the new agenda item known as universal coverage.

NONFINANCIAL BARRIERS TO ACCESS

This section illuminates a number of cultural, demographic, geographic, and institutional factors that adversely affect access, even in the case of individuals who have reasonable coverage or the means to purchase it.

Physician Practice Preferences

Access to medical care implies access to physicians. However, it has long been evident that most physicians are reluctant to practice among the poor, the geographically isolated, and minorities. Recent studies of the health care system in the nation's four largest metropolitan centers have revealed a 10-fold or greater differential in the proportion of physicians to population between more affluent areas and low-income, minority neighborhoods.⁵ Within such a professional culture, there is little reason for confidence that universal coverage by itself would effect an appreciable redistribution of the physician supply that would significantly improve access for underserved populations.

Stressed Public Hospitals

A large proportion of the urban poor and the uninsured obtain all, or the

bulk, of their medical care from emergency departments, clinics, and inpatient services of public hospitals, the vast majority of which are seriously strained with respect to capacity, staff, and equipment. Even with the introduction of universal coverage, it is likely that most of these low-income individuals will continue to seek and obtain care from these neighborhood institutions. At the same time, it is not likely that enhanced coverage would enable most of the public hospitals to remedy the pressures and inefficiencies under which they have long been operating in the near or middle term.

Teaching Hospitals

During the first half of this century—and throughout most of the preceding century—large urban teaching hospitals were a primary source of ambulatory and inpatient care for the poor and near poor. There was an implicit quid pro quo between the teaching hospital and its patients. Medical students, interns, residents, and fellows could learn the art of medicine only through practice and it was the poor who provided clinical experience for the novice. In recent decades the role of the poor in the learning process has diminished, although it has not disappeared. Other things, however, have changed; the emergency department, with a cost of \$140 or more per visit, is not a desirable site for the poor to receive ambulatory care. Some acute care hospitals are forced to retain patients, usually at a high per diem cost, because there is neither an available nursing home bed nor a suitable home to which they can be discharged. It is hard to see how universal coverage would resolve these institutional "non-fits."

Immigrant Status and Language Barriers

Medical care characteristically requires an interaction between the patient seeking care and the physician or other care giver. The United States has been admitting approximately a million legal immigrants, refugees, and illegal aliens every year for the last decade and the inflow will increase in the years ahead. A high proportion of these newcomers take up residence in coastal cities in the West, the South, and the East, although increasing numbers are also relocating to cities in the interior, such as Chicago, Ill.

Most of the immigrants do not, at least initially, understand, speak, or read English; others have entered the country illegally and generally avoid contact with institutions such as hospi-

tals and clinics for fear that routine record keeping may result in their detection. Although universal coverage would make it easier for many members of these groups to seek and obtain effective health services, language handicaps and the threat of deportation will continue to inhibit their use of the health care system.⁶

These barriers, separate and distinct from the issue of financing, are among those that need to be addressed if the implicit promise that universal coverage will provide effective access is to be realized.

INTERIM TARGETS TO EXPAND ACCESS

The analysis thus far has emphasized the powerful barriers that impair access to basic medical care for various individuals and groups, even in the presence of private or public insurance. The barriers are that much greater for the approximately 32 million persons who are uninsured. In sum, our pluralistic health care system is failing in greater or lesser degree to meet the basic needs for effective medical care of about one third of the American people—the uninsured, the underinsured, and the underserved Medicaid population.

The recent report of the Pepper Commission on Comprehensive Health Care concluded that the federal government could not take the lead to establish a system of national health insurance coverage for the entire population since the estimated cost to the government would be \$200 billion annually.⁷ The difficulties that the Bush administration and the Congress encountered in 1990 in writing and enacting a long overdue 5-year deficit reduction act (which probably grossly underestimated the size of the deficit) must be the point of departure for any proposals for health care reform that are put forward in 1991. In the near term, no significant additional financing can be expected from the federal government.

Although Congress, in the face of strong opposition from the National Governors' Association, mandated expanded coverage in 1990 for pregnant women and children by the Medicaid program, no large-scale federal initiatives appear likely. There are some federal and state proposals under consideration to provide coverage for the uninsured working population through employer mandates (with some state participation), but the odds are that none of the proposals will be enacted. This suggests that any additional funding for medical care must be sought from individuals and households, out-of-pocket or through payment of additional

"sin," income, or other taxes.

The point could be made that an important source of potential funding has been overlooked: reform of the extant system of medical care provision to reduce its excessive administrative and malpractice costs and the elimination of many unnecessary and ineffective treatments. It has been estimated that the combined total savings from such reforms could amount to as much as \$100 to \$150 billion annually. In the present context it is essential to note that although substantial savings might be recoverable over time, they cannot be spent until they have been recovered, and the lead time for implementing practice guidelines is likely to be of the order of a decade of intensive outcomes research.⁸

If one looks forward to their early implementation, all proposals for large-scale health care reform must be predicated on the foregoing pessimistic appraisal of the financing outlook. Nevertheless, it would be shortsighted to assume that the present frozen environment for health reform, as well as for other public social policy initiatives, will not ultimately thaw. The United States continues to have both the highest per capita standard of living and the lowest per capita tax rate of any advanced nation with the exception of Japan. However, it will take time before Americans reach a consensus that low taxes are not necessarily the best assurance of continuing national prosperity and progress. Hence, we present the following modest proposals for health reform, not because more ambitious goals could not be formulated or are not desirable, but because we believe that even these modest proposals will prove difficult to implement in the near term.

The Expansion of Medicaid

Despite the resistance of the state governors, we believe that Congress should continue to enact, as it has since 1984, mandates and incentives for the states to enlarge Medicaid coverage. In the last 6 years this effort has resulted in adding approximately 900 000 persons to the rolls. Despite federal and state fiscal constraints, we urge, at a minimum, that the present rate of expansion be continued and that, as the political and economic environment becomes more favorable, Congress accelerate the enrollment of all persons below the federal poverty standard. This policy change has been recommended by the American Medical Association, the Blue Cross and Blue Shield Association, and the Health Insurance Association of America.

Subsidized Coverage for the Near Poor

Some state experiments are under way to permit persons with incomes between 100% and 200% of the federal poverty level to buy into Medicaid. Since the federal government covers on the average 55% of state Medicaid outlays, and in low-income states as much as 78%, we urge the adoption of program models that, after critical assessment, have been found to be effective. This would represent, at the optimum, an addition of some 18 million people. At an average expenditure of \$2319 per recipient (fiscal year 1989), the estimated gross cost would be \$42 billion, but the net cost would be considerably less.⁹

Private Sector Catastrophic Insurance Policies

Almost 30% of the presently uninsured population are younger, employed persons, most of whom work for small employers or for themselves and earn in excess of 200% of the federal poverty level. The insurance industry, if freed from state mandates by an amendment to the Employee Retirement Income Security Act, should be able to offer a catastrophic policy for individuals for around \$1000 per annum, perhaps less. Early action to move toward this goal is indicated.

Expansion of the Federal Community Health Center Program

Between 1980 and 1990 the federal government maintained a reasonably constant level of funding for community health centers under the Department of Health and Human Services Community-Migrant Health Centers program (Public Health Service Act, section 330). In fiscal year 1990, this amounted to \$459 million and supported 527 centers.¹⁰ We recommend that the Congress expand this relatively inexpensive program, which, in the areas where it exists, helps to compensate for the severe dearth, if not absence, of primary care services.

Expansion of the National Health Service Corps and State Educational Debt Forgiveness Programs

As part of his budget proposal for 1991, Secretary Sullivan of the Department of Health and Human Services has included funds to revive the National Health Service Corps scholarship and loan forgiveness programs that were allocated just \$3 million in 1990, primarily for scholarships to medical students, and loan repayment for physicians (federal and state). This represented a dras-

tic decline from its peak of \$79.5 million in 1980. In 1989, the National Health Service Corps placed in practice sites 215 scholars who had completed their training and about 160 physician beneficiaries of the loan forgiveness program. However, in 1991 the pipeline will have been exhausted and virtually no National Health Service Corps scholars will be available for service. In light of the existence in the United States of 2000 underserved areas and a requirement of 4100 physicians in both public and private settings (in 1989, the Public Health Service sought over 1000 National Health Service Corps graduates to fill vacancies), we urge early congressional approval of the substantial expansion of the program as well as action to extend state debt forgiveness programs. It should be noted that the section 330 community health centers depend heavily on the above for their physician staffing.¹¹

State Subsidies for Uncompensated Care

Medicare currently assists hospitals that provide a large volume of uncompensated care through disproportionate share adjustments, special reimbursements for sole service hospitals, and recently increased reimbursements for rural hospitals. We recommend that more states follow the practice of New York, New Jersey, Florida, and California in creating a statewide pool for reimbursing hospitals that provide disproportionate amounts of uncompensated care. They can do so by levying special sin taxes as in the case of California, by a tax on insurance premiums or hospital revenues, or by some combination of both. Since the total amount of uncompensated hospital care is approximately \$13 billion annually, and since Medicare's contribution toward meeting this deficit is considerable, state subsidies to help cover the remainder should be manageable.¹²

The foregoing six recommendations are avowedly modest. They are aimed at extending coverage for the uninsured, providing improved primary care services for the underserved rural and urban populations, and helping to ensure that vulnerable hospitals, particularly hard-pressed public hospitals, have the essential financial resources to continue to operate. We are aware that these proposals to expand coverage do not address the substantial variability among the states in the scope and quality of their health care services. Someday, the United States will have to face up to more fundamental reforms to ensure that all people have access to essential health care in a system where the

costs of health care do not outpace the growth and productivity of the economy.

CONCLUDING OBSERVATIONS

This article has been written not by way of ideological opposition to the development of a system of universal health care coverage for the United States, but rather as an exposition—selective, not exhaustive—of the range of factors that will continue to impede access to effective care for a significant segment of the population, even with the institution of universal coverage. It is at the same time skeptical of the likelihood of early action toward a scheme of universal insurance at the federal or federal-state level, or at the governmental-private sector level, in view of the resistance of the American people to further large-scale taxation and the perilous budgetary situation of the federal government and most state governments. Perhaps the most powerful deterrent to early large-scale health re-

form is the preoccupation of the public with educational reform, drug control, crime reduction, environmental issues and—not to be overlooked—the consequences following the successful prosecution of the war against Iraq.

Faced with insurmountable obstacles to the early establishment of universal health care coverage, the United States should use the next years to experiment with removing discrete barriers that currently impair the access of many millions of Americans to proper medical care. Such experimentation should contribute to designing a more effective system of universal coverage, if and when the opportunity arises.

References

1. Ginzberg E. The VA in a vise: an outside observer spells out the social and economic realities ahead. *VA Practitioner*. 1989;6:39-46.
2. State of New York. *Review of the Financial Plan for the New York City Health and Hospitals Corporation for Fiscal Years 1991 Through 1994*. Albany, NY: Office of the State Comptroller; July 3, 1990. Report 7-91.
3. The Robert Wood Johnson Foundation. *Access to Health Care in the United States: Results of a 1986 Survey*. Princeton, NJ: The Robert Wood Johnson Foundation; 1987. Special Report No. 2.
4. *Statistical Abstract of the United States, 1990*. Washington, DC: US Bureau of the Census; 1990.
5. Ginzberg E, Berliner HB, Ostow M. *Changing US Health Care: A Study of Four Metropolitan Areas*. Boulder, Colo: Westview Press. In press.
6. Ginzberg E. Access to health care for Hispanics. *JAMA*. 1991;265:238-241.
7. US Bipartisan Commission on Comprehensive Health Care. *A Call for Action*. Washington, DC: The Pepper Commission on Comprehensive Health Care; 1990.
8. Ellwood PM. Shattuck Lecture: outcomes management: a technology of patient experience. *N Engl J Med*. 1988;318:1549-1556.
9. Health Care Financing Administration, Division of Medicaid Statistics. *State Medicaid Statistical Report*. Baltimore, Md: US Dept of Health and Human Services; 1989. HCFA publication 2082.
10. Omnibus Budget Reconciliation Act 1990. PL 101-239. December 19, 1989.
11. US General Accounting Office. *National Health Service Corps: Program Unable to Meet Need for Physicians in Underserved Areas*. Washington, DC: US General Accounting Office; August 10, 1990. Publication GAO/HRD-90-128.
12. Office of National Cost Estimates. *National health expenditures, 1988. Health Care Fin Rev*. 1990;11(4):1-41.

Caring for the Uninsured

Choices for Reform

These recent events provide the impetus for this theme issue of *THE JOURNAL*: (1) Government reports show a 24% increase in the last decade in the total number of uninsured people and a 40% increase in the number of uninsured children.¹⁴ Most uninsured children are part of a family with a working adult. (2) Recent studies have found that, despite considerable amounts of uncompensated care provided by hospitals and physicians, Americans without health insurance face major barriers to the receipt of needed health services. Although they suffer from higher rates of ill health than the insured population, the uninsured report fewer hospitalizations and fewer visits to a physician, shorter hospital stays, and fewer discretionary inpatient hospital treatments and tests, at higher cost. The uninsured also experience higher mortality rates when hospitalized than persons with health insurance coverage who have similar medical diagnoses.⁶⁻¹¹ (3) There is evidence of growing public dissatisfaction with our inability to resolve this serious problem, and there are signs of a broad consensus that some type of major reform is now required.

On one hand, current opinion survey findings show that Americans are relatively well satisfied with the medical care they receive personally compared, for example, with citizens of Canada, Great Britain, or (West) Germany. However, growing public concern over access to care for the uninsured and sharply rising costs have led Americans to be much less satisfied with the overall workings of our health care system (Table 1).^{12,13}

In addition, as shown in the Figure, increased awareness of and experience with these problems have led the public, corporate executives, and labor union leaders to support some form of universal insurance coverage, even if it means an increase in taxes.^{14,15}

These factors led the editors of *THE JOURNAL* to ask readers last August to propose major options to resolve this problem.¹⁶ Eighty authors or groups of authors from a variety of professional backgrounds submitted proposals for needed reforms. This issue of *THE JOURNAL* is an attempt to include in one place most of the major approaches to this problem at the national level. (Additional national proposals have appeared in recent issues,¹⁷⁻²⁰ and state proposals will appear in subsequent issues.) After rigorous peer review, 13 definitive proposals were selected from among the many thoughtful ones submitted. These proposals follow one of four approaches: (1) a compulsory, employer-based private insurance program, with the government insuring nonworkers and the poor; (2) a plan that requires employers to provide their employees with health insurance or pay a tax, with the government insuring nonworkers and the poor; (3) a program of income-related tax credits for individuals, independent of

their employers, for the purchase of private insurance; and (4) an all-government insurance system.

Table 2 displays the proposals grouped into these four categories in a way that facilitates comparison. Although this summary masks some innovative features of individual proposals, it highlights the broad similarities. Each proposal shares the goal of achieving near-universal access to care through improved insurance coverage of the population; it is the *means* to achieve this that separate them.

We expect this framework to promote a better understanding of the choices available to us as a nation to address the problem of access to care, and ultimately to aid in finding a consensus on some acceptable, uniquely American approach to reform. Before the publication of this issue of *THE JOURNAL*, a series of national opinion surveys asked a random sample of the general public, corporate executives, and labor union leaders about their preference for two of the four types of proposals presented herein (Table 3).^{14,21} The findings indicate that, although most people favored some type of universal plan, there was no majority supporting either approach. This lack of agreement on any specific plan is similar to the

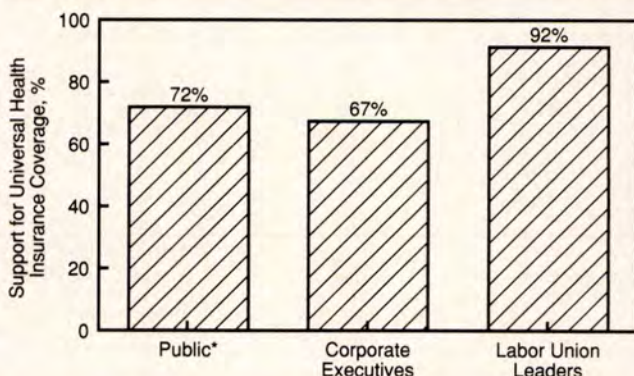
Table 1.—Public Satisfaction With Health Care System and With Own Medical Care in Four Nations*

Country	Very Satisfied With Own and Family's Care, %	Satisfied With Current Health Care System,† %
United States	55	10
Canada	60	56
Great Britain	39	27
(West) Germany	45	41

*From the Harvard Community Health Plan and Louis Harris & Associates.¹³

†Believed that only minor changes were needed.

Support for universal health insurance coverage, even if it means an increase in taxes, among the general public, corporate executives, and labor union leaders. Asterisk indicates that there were minor wording differences in the question asked of the general public (from public opinion polls conducted by the Metropolitan Life Insurance Company and Louis Harris & Associates¹⁴ and by the Los Angeles Times¹⁵).



From the Department of Health Policy and Management, Harvard School of Public Health, Boston, Mass.

Reprint requests to Department of Health Policy and Management, Harvard School of Public Health, 677 Huntington Ave, Boston, MA 02115 (Dr Blendon).

Table 2.—Proposals for Reform in This Issue of THE JOURNAL*

Author of Proposal	Coverage	Administration	Financing	Cost Containment/ Provider Reimbursement	Other Distinctive Features
TYPE I: COMPULSORY PRIVATE INSURANCE THROUGH EMPLOYERS, WITH GOVERNMENT INSURING NONWORKERS AND THE POOR					
Kirkman-Liff	Universal	Private: insurers offer community-rated plans Government: Medicare/Medicaid enrollees get vouchers to buy private insurance	Employer/employee premium sharing; federal government pays employer share of premium for nonworkers	Copayments/cost sharing; managed care optional; reimbursement negotiated between provider and payer representatives	Copies some features of German and Dutch systems; LTC benefits unmentioned
Todd et al (American Medical Association)	Nearly universal; excludes nonpoor nonworkers	Private: insurers offer private plans or state risk pool for uninsurable and others Government: unchanged	No change	Changes tax treatment of employee benefits; health promotion; repeals state-mandated benefits; seeks reduction in administrative costs; improves Medicaid reimbursement levels; private insurance unchanged	Adds private LTC benefits and expands Medicaid; catastrophic coverage; reforms Medicare trust fund
Rockefeller (Pepper Commission)	Universal	Private: insurers offer private plans Government: replaces Medicaid with new program for poor nonworkers, and self-employed, with buy-in option for employed	Employer/employee premium sharing; existing government sources plus new taxes	Encourages use of managed care; cost sharing; improves consumers' knowledge; malpractice reform; public program pays Medicare rates; private insurance unchanged	Insurance reform; universal coverage of LTC
Bronow et al (Physicians Who Care)	Nearly universal; excludes nonpoor nonworkers	Private: community-rated insurance plans with high deductibles Government: expanded Medicaid coverage	Employer/employee premium sharing plus individual medical savings accounts; government unchanged	High cost sharing; reimbursement unchanged	Adds public-private LTC coverage and catastrophic coverage
Nutter et al (Medical Schools Section, American Medical Association)	Nearly universal; excludes nonpoor nonworkers	Private: insurance plus insurance risk pools Government: expanded Medicaid coverage	Employer/employee premium sharing; employment-based tax to cover new Medicaid costs; elderly pay for Medicare expansion	All-payer, prospective payment for hospital and professional services	Eliminates deductibility of employer contributions; adds LTC and catastrophic coverage to Medicare
TYPE II: LAW REQUIRING EMPLOYERS TO PROVIDE PRIVATE INSURANCE TO EMPLOYEES OR PAY EQUIVALENT TAX, WITH GOVERNMENT INSURING NONWORKERS AND THE POOR					
Davis	Universal	Private: insurers offer private plans Government: Medicare coverage for all others	Employer/employee premium sharing or employer payroll tax; income tax; general revenues	All payers adopt Medicare rates and volume performance standards for hospitals and physicians	Allows states to buy Medicaid enrollees into Medicare; LTC expansion optional for states
Schwartz (Kansas Employer Coalition on Health)	Universal	Private: insurers offer private plans Government: regional public sponsors and Medicare	Employer/employee premium sharing; tax on individuals in pool; general revenue	Malpractice reform; increased cost sharing; health promotion; insurance price increases tied to Consumer Price Index, with government adjustments; mandatory community rating of insurance	Insurers join reinsurance pools
Enthoven and Kronick	Universal	Private insurance, Medicare, and public sponsors for all others	Employer/employee premium sharing; other sources unchanged	Increased cost sharing; market forces growing from competing managed care plans; changes the tax deductibility of employer health benefits	Emphasizes managed care delivery systems; no change in LTC benefits
Holahan et al	Universal	New federal-state program for anyone not covered by an employer or Medicare	Employer/employee premium sharing or tax; existing and new state and federal tax revenue	Federal share of health expenditures tied to growth in GNP; states have strong cost-containment incentives; tax deductibility of benefits limited to standard benefit package; reimbursement unchanged	Federalizes LTC benefits; cost containment left to the states; eliminates Medicaid
TYPE III: TAX CREDIT FOR PURCHASE OF PRIVATE INSURANCE					
Butler (Heritage Foundation)	Universal	Individuals purchase private coverage from competing insurers independent of employers; Medicare/Medicaid beneficiaries get vouchers	Individual payment for all premiums or care; government pays for poor	Changes in tax treatment of health benefits to discourage overinsuring and overuse; reimbursement unchanged	Purchase of LTC coverage at discretion of individuals

TYPE IV: ALL-GOVERNMENT INSURANCE SYSTEM

Roybal (USHealth Act)	Universal	Single insurance system run by new agency; role for private insurers	Same sources of revenue to be paid into single account	Prospective payment, with total budget cap of 12% to 13% of GNP; all reimbursement based on Medicare rules	Adds broad range of health and LTC benefits
Grumbach et al (Physicians for a National Health Program)	Universal	Public administrator replaces Medicare, Medicaid, and private insurance	Payroll tax; existing government revenue sources; new taxes	Annual hospital budget negotiated with state plan based on past expenditures, performance, and cost and use projections; physicians paid on negotiated fee schedule	Each state determines who runs the plan; no copayments and deductibles; LTC fully covered
Fein (Committee for National Health Insurance)	Universal	States have much flexibility with federally specified benefits and budget oversight	Federal and state taxes and premiums paid into single state agency; agency pays insurers or providers on capitated basis; federal contribution increases based on growth in GNP	State and national health care budgets; negotiated payments to institutional providers; negotiated physician fee schedule; expansion of capitated systems; consolidated administration; government review of technology and treatment effectiveness; administrative savings	Encourages state experimentation; LTC benefits unchanged

*LTC indicates long-term care; GNP, gross national product.

Table 3.—Preferences for Universal Health Insurance Systems*

System Option	Corporate Executives, %	Labor Union Leaders, %	Public, %
Favor an all-government national health plan	27	58	46
Favor a compulsory private insurance plan, with government providing for the unemployed	35	28	33
Favor no change in the present system	35	10	19

*From Louis Harris & Associates Inc.¹⁷

dilemma faced in the 1970s. During the early part of that decade, more than a dozen initiatives for universal health coverage were introduced in Congress. However, leaders of key groups and the public were unable to reach agreement on any single approach to reform.²²⁻²⁴ Because the problem of adequately caring for the uninsured has been worsening, we hope that the discussion generated by this theme issue will make it easier to reach a national consensus.

When considering the various proposals, it is important to keep in mind the caveat raised by Ginzberg and Ostow²⁵ in their article in this issue. Even if we do enact a universal health care plan, we will need additional solutions to "the range of [nonfinancial] factors that will continue to impede access to effective care for a significant segment of the population."

Robert J. Blendon, ScD
Jennifer N. Edwards, MHS

Dr Blendon is a non-stock-holding director of AMEV Holdings Inc, in New York, NY, a Dutch-American firm that owns 12 US companies, two of which are in the insurance business. Both authors are collaborators with Louis Harris & Associates in a number of surveys, polls, and publications. Financial support from this activity, given through Harvard University, provides partial support for their current salaries.

1. Walden D, Wilensky G, Kasper J. *Changes in Health Insurance Status: Full Year and Part Year Coverage: Data Preview 21*. Rockville, Md: National Center for Health Services Research; 1985. US Dept of Health and Human Services publication PHS 85-3377.

2. Short P. *Estimates of the Uninsured Population, Calendar Year 1987*.

Rockville, Md: Public Health Service; 1990. US Dept of Health and Human Services publication PHS 90-3469. National Medical Expenditure Survey Data Summary 2.

3. Cunningham P, Monheit A. Insuring the children: a decade of change. *Health Aff*. Winter 1990;9:76-90.

4. Congressional Research Service. *Health Insurance and the Uninsured: Background Data and Analysis*. Washington, DC: US Library of Congress; 1988:229-230. Publication EPW 88-537.

5. Davis K, Rowland D. Uninsured and underserved: inequalities in health care in the United States. *Milbank Q*. 1983;61:160-163.

6. Freeman H, Blendon R, Aiken L, Sudman S, Mullinex C, Corey C. Americans report on their access to health care. *Health Aff*. Spring 1987;6:13-14.

7. Blendon R, Aiken L, Freeman H, Kirkman-Liff B, Murphy J. Uncompensated care by hospitals or public insurance for the poor: does it make a difference? *N Engl J Med*. 1986;314:1160-1163.

8. Wenneker MB, Weissman JS, Epstein AM. The association of payer with utilization of cardiac procedures in Massachusetts. *JAMA*. 1990;264:1255-1260.

9. Weissman J, Epstein AM. Case mix and resource utilization by uninsured hospital patients in the Boston metropolitan area. *JAMA*. 1989;261:3572-3576.

10. Aday L, Fleming G, Andersen R. *Access to Medical Care in the US: Who Has It, Who Doesn't?* Chicago, Ill: Pluribus Press; 1984.

11. Hadley J, Steinberg EP, Feder J. Comparison of uninsured and privately insured hospital patients: condition on admission, resource use, and outcome. *JAMA*. 1991;265:374-379.

12. Blendon R, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in 10 nations. *Health Aff*. Summer 1990;9:185-192.

13. *Comparing Health Systems: Health Service Satisfaction in Six Countries*. Boston, Mass: Harvard Community Health Plan and Louis Harris & Associates; 1990.

14. Taylor H, Leitman R. *Trade-offs and Choices: Health Policy Options for the 1990s*. New York, NY: Metropolitan Life Insurance Company and Louis Harris & Associates; 1990. Study 902026.

15. *Health Care in the United States*. Storrs, Conn: Roper Center for Public Opinion Research and the Los Angeles Times; 1990. Poll 212.

16. Lundberg GD, Blendon RJ. A special JAMA theme issue on caring for the uninsured and the underinsured. *JAMA*. 1990;264:739.

17. Kleinman LC. Health care in crisis: a proposed role for the individual physician as advocate. *JAMA*. 1991;265:1991-1992.

18. Moore GT. Let's provide primary care to all uninsured Americans—now! *JAMA*. 1991;265:2108-2109.

19. Daniels N. Is the Oregon rationing plan fair? *JAMA*. 1991;265:2232-2235.

20. Gleicher N. Expansion of health care to the uninsured and underinsured has to be cost-neutral. *JAMA*. 1991;265:2388-2390.

21. *Health Care Poll*. Storrs, Conn: Roper Center for Public Opinion Research and Louis Harris & Associates; 1990.

22. Blendon R, Donelan K. The public and the emerging debate over national health insurance. *N Engl J Med*. 1990;323:208-212.

23. Etheredge L. Universal health insurance: Lessons of the 1970's, prospects for the 1990's. *Front Health Serv Manage*. Winter 1990;6:3-35.

24. Waldman S. *National Health Insurance Proposals*. Washington, DC: Social Security Administration; 1974:21-44. Publication SSA7-11902.

25. Ginzberg E, Ostow M. Beyond universal health insurance to effective health care. *JAMA*. 1991;265:2559-2562.

National Health Care Reform

An Aura of Inevitability Is Upon Us

"With malice toward none; with charity for all. . . ." So spoke Abraham Lincoln in his second Inaugural Address, recognizing that he had no political consensus regarding either the constitutionality of states' seceding or the morality of slavery's being abolished. Nonetheless, he knew what was right and was able, through persuasive, often inspiring rhetoric, to conclude a bloody and divisive civil war and constitute the foundation for this great democracy.

Yet, access to basic medical care for all of our inhabitants is still not a reality in this country. There are many reasons for this, not the least of which is long-standing, systematic, institutionalized racial discrimination. The major studies of health care maldistribution reinforce this statement with hard data, especially with regard to blacks and Hispanics.^{1,2} It is not a coincidence that the United States of America and the Republic of South Africa—the only two developed, industrialized countries that do not have a national health policy ensuring that all citizens have access to basic health care—also are the only two such countries that have within their borders substantial numbers of underserved people who are different ethnically from the controlling group.

When we look at health care access, we are especially looking at the results of these disparities. The problem is manifested in a higher percentage of people who are black and Hispanic being unemployed and thus having less employment-related health insurance and in a higher percentage of blacks and Hispanics being in low-level or part-time employment that provides fewer health insurance opportunities. Medicaid coverage by poverty-line demarcations and physician payments are the lowest in many states that have the largest population of blacks; mainstream private medicine, particularly in large cities such as our nation's capital, has turned its back on the poor; most physicians refuse even to see such patients (David Hilfiker, MD, oral communication, February 6, 1991).

Although there may be consensus that our society must provide basic medical/health care for all of our people, we seem not to be close to a consensus on how to do it. Virtually all comprehensive health care proposals involve major legislation of some sort. Since consensus means "general agreement or unanimity; group solidarity in sentiment or belief," it is unlikely that, either as a society or as a profession, we will ever reach a true consensus on how to proceed, so we must not wait for one. To pass federal legislation requires only a simple majority in both houses of Congress plus presidential approval.

Let us do our part to end this last health-related carryover from antebellum days and provide equal opportunities for health for all of our people, thus continuing to carry out Lincoln's agenda.

JOURNAL Initiatives

Our *JAMA* column "Caring for the Poor" began December 4, 1987, with Hilfiker's³ inspiring essay "Unconscious on a Corner," adjacent to the editorial "Fifty Hours for the Poor."⁴ The editorial was coauthored by Larry Bodine, then editor of the American Bar Association journal, and myself and ran concurrently in *JAMA* and the *ABA Journal*. We reran the

editorial in *JAMA* between Thanksgiving and Christmas in 1988 and again in 1989. Among the eight other articles that appeared in that column was one by then-AMA President, James E. Davis, MD,⁵ who made service by physicians without expectation of compensation the theme of his 1988-1989 presidency. A column by Dr Eric Muñoz⁶ on the Hispanic poor spawned the 1991 *JAMA* theme issue dedicated to Hispanic health.⁷ Emily Friedman's⁸ "The Torturer's Horse," perhaps more than any other piece, sparked today's theme of "Caring for the Uninsured and Underinsured." Robert J. Blendon's⁹ "What Should Be Done About the Uninsured Poor?" positioned him to coedit this issue. And AMA President C. John Tupper's¹⁰ Inaugural Address launched his year-long campaign "Health Access America."

When it became clear about a year ago that our worsening crises of access and cost of health care in the United States extended to far more than the poor, we decided with the editors of the AMA specialty journals that all 10 of the AMA scientific journals would focus on this question in May 1991.¹¹ Fifty-two articles on this subject are also appearing concurrently in the nine specialty journals, and they will be bound as a companion compendium.

The new "Caring" column began on April 17, 1991, with an essay by Lawrence Kleinman, MD,¹² of UCLA that challenges physicians to dedicate themselves to making positive change happen. A week later, Gordon Moore, MD,¹³ of Harvard noted that a complete solution to the problem may not be rapidly forthcoming; so we should solve the problem of access to primary care *now* on a priority basis. On May 1, Norman Daniels, PhD,¹⁴ of Tufts analyzed the philosophical base of the bold Oregon rationing experiment. And on May 8, Norbert Gleicher, MD,¹⁵ of Chicago pointed the way for providing essential health care for all of our people with *no* increased cost to the total economy. He showed how we could achieve this goal by redirecting funding away from unnecessary patient luxuries and from profiteering by those with vested self-interests in our medical affluence complex.

Blendon and Edwards¹⁶ have summarized the 13 broad-based articles appearing in this issue. These proposals represent the political and economic spectrum, from the far left to the far right, from Atlantic to Pacific, from urban to rural settings, from academia, from labor, from consumers, from government, and from organized medicine. Extraordinarily diverse in concept, the proposals all share a common thread—a serious intention to find a way to meet our professional and societal responsibilities of caring well for the basic health of all of our people. Subsequent *JAMA* articles will appear in the Caring column, detailing individual state, local, and national proposals and the databases from which they arise.

De Facto Rationing

Since virtually no one is completely healthy on any day, the potential use of medical resources is endless. There will never be enough providers or enough money to give all possible care to everybody. Thus, care is rationed every day but in irrational ways. How do we currently ration?

- By access control through pricing that does not discriminate between needed and effective medical care and unneeded or ineffective care.

Reprint requests to Scientific Publications Group, American Medical Association, 515 N State St, Chicago, IL 60610 (Dr Lundberg).

- By not providing sufficient resources for disease prevention, which results in unwanted teenage pregnancies, widespread initiation of tobacco addiction, and rampant sexually transmitted diseases.

- By insufficient transportation to appropriate facilities that affects rural and inner-city residents alike.

- By absolute and relative shortages of organs for transplantation that lead to unnecessary deaths.

- By major variations in practice patterns between geographic areas without meaningful outcome differences, demonstrating a waste of resources.

- By differing payment approval policies that function under widely varied rules and institutionalize such variations.

- By accepting social class membership as a determinant of whether patients can or cannot pay.

- Through ignorance about the availability and desirability of effective preventive and treatment services.

- By language and cultural barriers that exclude Hispanics and blacks from appropriate access.

- By not training sufficient numbers of health professionals from minority backgrounds.

- By training insufficient numbers of primary care physicians and excessive numbers of specialist technocrats.

Health care rationing, then, is both inevitable and pervasive. But we need to begin rationing rationally.

Cost Control as the Political 'Litmus Test'

Recent AMA-sponsored surveys demonstrate that neither the American people nor American physicians consider quality to be the main problem facing medical/health care in the United States; rather, they name cost as the first concern, and access as the second.¹⁷ Because the opinion that costs are a huge medical problem is strongly held by leaders of industry, labor, and government, as well as by physicians and the general public, and because of concerns about whether Americans are receiving appropriate value for money spent, I do not believe that meaningful health care reform will come about unless it is tied to some form of cost control.

The cost increases in medical care since 1955 that have taken a progressively higher percentage of the gross national product (GNP) can generally be ascribed to:

- economic inflation
- increased number of elderly persons
- increased number of surviving tiny neonates
- new technology
- professional liability
- inappropriate uses of diagnostic or therapeutic procedures
- increased number of health care providers
- heightened societal and/or personal expectations.

Because of the steepness of the slope and the huge expenditures involved, a substantial segment of our society, especially leaders of businesses, both large and small, is becoming frantic about rising health care costs. In national (and rational) health care reform, successful cost containment will be both the political "litmus test" and the gateway to universal access.

Many proposals in this theme issue address the problem of costs; several incorporate methods of control. Controls could include:

- education of physicians and the public about proper application of clinical guidelines or parameters
- increased use of patient choices for spending options

- high deductibles and copayments to increase patient restraint in demanding care

- pre-use approval for expensive technology, depending upon safety, efficacy, and cost-effectiveness

- a maximum percentage of GNP for health capped by law

- overall national or state medical expense caps

- expenditure targets

- diagnosis related groups for all hospitals and payers

- Resource-Based Relative Value Scale payment for physicians from all payers

- limitation of number and types of physicians

- marketplace competition with strictly managed care.

We Can Succeed

In the past several months, this country demonstrated once again that it is capable of addressing a serious national crisis and succeeding brilliantly in meeting its objectives. I refer to the 42-day air and 100-hour air-land war for the liberation of Kuwait. Why did we succeed? We had the knowledge, the resources, the skills, the time, clear-cut objectives, a belief that the foe was morally reprehensible, a narrow but decisive political margin, and, as with Abraham Lincoln and the War Between the States, we had the national will, the result in large part of presidential leadership.

If the Iron Curtain can be lifted, the Warsaw Pact dissolved, and East and West Germany politically reunited, all quite rapidly, because it was the right thing to do and the time had come—surely we in this rich and successful country can manage to provide basic medical care because it too is the right thing to do, and the time has come. A long-term crying need has developed into a national moral imperative and now into a pragmatic necessity as well.

An aura of inevitability is upon us. It is no longer acceptable morally, ethically, or economically for so many of our people to be medically uninsured or seriously underinsured. We can solve this problem. We have the knowledge and the resources, the skills, the time, and the moral prescience. We need only clear-cut objectives and proper organization of our resources. Have we now the national will and leadership?

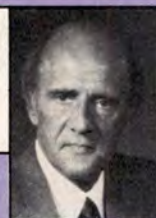
George D. Lundberg, MD

1. Treviño FM, Moyer ME, Valdez RB, Stroup-Benham CA. Health insurance coverage and utilization of health services by Mexican Americans, mainland Puerto Ricans, and Cuban Americans. *JAMA*. 1991;265:233-237.
2. Wenker MB, Epstein AM. Racial inequalities in the use of procedures for patients with ischemic heart disease in Massachusetts. *JAMA*. 1989;261:253-257.
3. Hilfiker D. Unconscious on the corner. *JAMA*. 1987;258:3155-3156.
4. Lundberg GD, Bodine L. Fifty hours for the poor. *JAMA*. 1987;258:3157.
5. Davis JE. National initiatives for care of the medically needy. *JAMA*. 1988;259:3171-3173.
6. Muñoz E. Caring for the Hispanic poor: a growing segment of American society. *JAMA*. 1988;260:2711-2712.
7. Hispanic health. *JAMA*. 1991;265(theme issue):161-296.
8. Friedman E. The torturer's horse. *JAMA*. 1989;261:1481-1482.
9. Blendon RJ. What should be done about the uninsured poor? *JAMA*. 1988;260:3176-3177.
10. Tupper CJ. Dreams, dollars, and deeds: the sacred fire and Health Access America. *JAMA*. 1990;264:1150-1151.
11. Lundberg GD, Blendon RJ. A special *JAMA* theme issue on caring for the uninsured and underinsured. *JAMA*. 1990;264:739.
12. Kleinman L. Health care in crisis: a proposed role for the individual physician as advocate. *JAMA*. 1991;265:1991-1992.
13. Moore GT. Let's provide primary care to all uninsured Americans—now! *JAMA*. 1991;265:2108-2109.
14. Daniels N. Is the Oregon rationing plan fair? *JAMA*. 1991;265:2232-2235.
15. Gleicher N. Expansion of health care to the uninsured and underinsured has to be cost-neutral. *JAMA*. 1991;265:2388-2390.
16. Blendon RJ, Edwards JN. Caring for the uninsured: choices for reform. *JAMA*. 1991;265:2563-2565.
17. Harvey LK. *AMA Survey of Public and Physicians' Opinions on Health Care Issues*. Chicago, Ill: American Medical Association; 1990 and 1991.



MEDICAL DIRECTOR'S PAGE

Bruce H. Medd, M.D., Associate Vice President and Director,
Professional Services



Managing the Benzodiazepine-Dependent Patient

Since their introduction almost three decades ago, the benzodiazepines have become one of the most widely prescribed group of drugs in the history of medicine. Despite periodic trends to criticize the broad use of the benzodiazepines, their popularity seems to be well deserved, when one considers the many thousands of references in the worldwide medical literature that clearly reflect the significant benefits realized with these agents. In addition to their more familiar applications in anxiety, insomnia and preoperative sedation, administration of the benzodiazepines extends to certain life-saving uses as well (i.e., control of the muscle spasms of tetanus and other conditions often seen in certain Third World countries).

The potential for abuse and the occurrence of dependence during benzodiazepine therapy has prompted numerous studies and reports. Although physiologic dependence can develop in some patients, available evidence does not appear to support the wide occurrence of abuse in the general population.¹ However, it is critically important that health care professionals be able to recognize and treat benzodiazepine dependence when it occurs. To assist physicians in this effort, a workshop was held in Basle, Switzerland, in September of 1987. Experts gathered there to evaluate their experiences and establish guidelines for managing benzodiazepine-dependent patients.²

These experts agreed that:²

- the physician must evaluate a number of behavioral and clinical features and their time course to distinguish benzodiazepine-dependent patients from those patients with chronic anxiety who may be suffering from a return of their symptoms.
- some patients should not be withdrawn from therapy even if they show signs of dependence. Careful evaluation of the patient should always precede any attempt at withdrawal.
- while there are many methods available for the safe and effective withdrawal of the benzodiazepine-dependent patient, gradual reductions in dosage in an outpatient setting is preferred in uncomplicated cases.
- continued management of the patient withdrawn successfully is essential to reduce the patient's risk of relapsing into drug dependency. Of course, the importance of support from the patient's family and friends during and after the withdrawal period cannot be stressed enough.

References

1. Woods JH, Katz JL, Winger G: Use and abuse of benzodiazepines: Issues relevant to prescribing. *JAMA*. 1988;260(23):3476-3479.
2. Marks J: Techniques of benzodiazepine withdrawal in clinical practice: A consensus workshop report. *Med Toxicol Adverse Drug Exp*. 1988;3(4):324-333.

If you would like more information on the management of benzodiazepine-dependent patients, ask your Roche representative or write to me: Bruce H. Medd, M.D., Associate Vice President and Director, Professional Services, Roche Laboratories, a division of Hoffmann-La Roche Inc., Nutley, New Jersey 07110.



Roche Laboratories

a division of Hoffmann-La Roche Inc.

340 Kingsland Street
Nutley, New Jersey 07110-1199

ZESTRIL® (LISINOPRIL)

(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT.)

INDICATIONS AND USAGE: ZESTRIL is indicated for the treatment of hypertension. It may be used alone as initial therapy or concomitantly with other classes of antihypertensive agents.

In using ZESTRIL, consideration should be given to the fact that another angiotensin converting enzyme inhibitor, captopril, has caused agranulocytosis, particularly in patients with renal impairment or chronic vascular disease, and that available data are insufficient to show that ZESTRIL does not have a similar risk. (See WARNINGS.)

CONTRAINDICATIONS: ZESTRIL is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an angiotensin converting enzyme inhibitor.

WARNINGS: Angioedema: Angioedema of the face, extremities, lips, tongue, glottis and/or larynx has been reported in patients treated with angiotensin converting enzyme inhibitors, including ZESTRIL. In such cases, ZESTRIL should be promptly discontinued and appropriate therapy and monitoring should be provided until complete and sustained resolution of signs and symptoms has occurred. In instances where swelling has been confined to the face and lips the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. Where there is involvement of the tongue, glottis or larynx likely to cause airway obstruction, appropriate therapy, eg, subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL) and/or measures necessary to ensure a patent airway should be promptly provided. (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension was rarely seen in uncomplicated hypertensive patients but is a possible consequence of the use with ZESTRIL in salt/volume-depleted persons, such as those treated vigorously with diuretics or patients on dialysis. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients with severe congestive heart failure, with or without associated renal insufficiency, excessive hypotension has been observed and may be associated with oliguria and/or progressive azotemia, and rarely with acute renal failure and/or death. Because of the potential fall in blood pressure in these patients, therapy should be started under close supervision. Such patients should be followed closely for the first two weeks of treatment and whenever the dose of ZESTRIL and/or diuretic is increased. Similar considerations apply to patients with ischemic heart or cerebrovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses which usually can be given without difficulty once the blood pressure has increased after volume expansion.

Neutropenia/Agranulocytosis: Another angiotensin converting enzyme inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment especially if they also have a collagen vascular disease. Available data from clinical trials of ZESTRIL are insufficient to show that ZESTRIL does not cause agranulocytosis at similar rates. Marketing experience has revealed rare cases of neutropenia and bone marrow depression in which a causal relationship to lisinopril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Fetal/Neonatal Morbidity and Mortality: ACE inhibitors, including ZESTRIL, can cause fetal and neonatal morbidity and mortality when administered to pregnant women.

Lisinopril crosses the human placenta. When ACE inhibitors have been used during the second and third trimesters of pregnancy, there have been reports of hypotension, renal failure, skull hypoplasia, and/or death in the newborn. Oligohydramnios has also been reported, presumably representing decreased renal function in the fetus; limb contractures, craniofacial deformities, hypoplastic lung development and intrauterine growth retardation have been reported in association with oligohydramnios. Patients who do not deliver during the second and third trimesters of pregnancy should be apprised of the potential hazards to the fetus, and frequent ultrasound examinations should be performed to look for oligohydramnios. If oligohydramnios is observed, ZESTRIL should be discontinued unless it is considered life-saving for the mother.

Other potential risks to the fetus/neonate exposed to ACE inhibitors include: intrauterine growth retardation, prematurity, patent ductus arteriosus; fetal death has also been reported. It is not clear, however, whether these reported events are related to ACE inhibition or the underlying maternal disease. It is not known whether exposure limited to the first trimester can adversely affect the outcome.

Infants exposed to ACE inhibitors should be closely monitored for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion.

Another ACE inhibitor, enalapril, has been removed from the neonatal circulation by peritoneal dialysis and theoretically may be removed by exchange transfusion, although there is no experience with the latter procedure. There is no experience with either of these procedures for removing lisinopril or other ACE inhibitors from the neonatal circulation.

Lisinopril was not teratogenic in mice treated on days 6-15 of gestation with up to 1,000 mg/kg/day (625 times the maximum recommended human dose). There was an increase in fetal resorptions at doses down to 100 mg/kg at doses of 1,000 mg/kg this was prevented by saline supplementation. There was no fetotoxicity or teratogenicity in rats treated with up to 300 mg/kg/day (188 times the maximum recommended dose) of lisinopril at days 6-17 of gestation. In rats receiving lisinopril from day 15 of gestation through day 21 postpartum, there was an increased incidence in pup deaths on days 2-7 postpartum and a lower average body weight of pups on day 21 postpartum. The increase in pup deaths and decrease in pup weight did not occur with maternal saline supplementation.

Lisinopril, at doses up to 1 mg/kg/day, was not teratogenic when given throughout the organogenic period in saline supplemented rabbits. Saline supplemented rabbits (physiologic saline in place of tap water) was used to eliminate maternal-toxic effects and enable evaluation of the teratogenic potential at the highest possible dosage level. The rabbit has been shown to be extremely sensitive to angiotensin converting enzyme inhibitors (captopril and enalapril) with maternal and fetotoxic effects apparent at or below the recommended therapeutic dosage levels in man.

Fetotoxicity was demonstrated in rabbits by an increased incidence of fetal resorptions at an oral dose of lisinopril of 1 mg/kg/day and by an increased incidence of incomplete ossification at the lowest dose tested (0.1 mg/kg/day). A single intravenous dose of 15 mg/kg of lisinopril administered to pregnant rabbits on gestation days 16, 21, or 26 resulted in 88% to 100% fetal death.

If ZESTRIL is used during pregnancy or if the patient becomes pregnant while taking ZESTRIL, the patient should be apprised of the potential hazards to the fetus.

PRECAUTIONS: General: Impaired Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe congestive heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with angiotensin converting enzyme inhibitors, including ZESTRIL, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine may occur. Experience with another angiotensin converting enzyme inhibitor suggests that these increases are usually reversible upon discontinuation of ZESTRIL and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some hypertensive patients with no apparent preexisting renal vascular disease have developed increases in blood urea nitrogen and serum creatinine, usually minor and transient, especially when ZESTRIL has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction of ZESTRIL and/or discontinuation of diuretic may be required.

Evaluation of the hypertensive patient should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)
Hyperkalemia: In clinical trials hyperkalemia (serum potassium greater than 5.7 mEq/L) occurred in approximately 2.2% of hypertensive patients and 4.0% of patients with congestive heart failure. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in approximately 0.1% of hypertensive patients. Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with ZESTRIL. (See Drug Interactions.)

Cough: Cough has been reported with the use of ACE inhibitors. Characteristically, the cough is nonproductive, persistent and resolves after discontinuation of therapy. ACE inhibitor-induced cough should be considered as part of the differential diagnosis of cough.

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, ZESTRIL may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients: Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of ZESTRIL. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Symptomatic Hypotension: Patients should be cautioned to report light-headedness especially during the first few days of therapy. If actual syncope occurs, the patient should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with their physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (eg, sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with ZESTRIL is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

DRUG INTERACTIONS: Hypotension - Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted, may occasionally experience an excessive reduction of blood pressure after initiation of therapy with ZESTRIL. The possibility of hypotensive effects with ZESTRIL can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with ZESTRIL. If it is necessary to continue the diuretic, initiate therapy with ZESTRIL at a dose of 5 mg daily, and provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS, and DOSAGE AND ADMINISTRATION.) When a diuretic is added to the therapy of a patient receiving ZESTRIL, an additional antihypertensive effect is usually observed. Studies with ACE inhibitors in combination with diuretics indicate that the dose of the ACE inhibitor can be reduced when it is given with a diuretic. (See DOSAGE AND ADMINISTRATION.)

Indomethacin: In a study in 36 patients with mild to moderate hypertension where the antihypertensive effects of ZESTRIL alone were compared to ZESTRIL given concomitantly with indomethacin, the use of indomethacin was associated with a reduced effect, although the difference between the two regimens was not significant.

Other Agents: ZESTRIL has been used concomitantly with nitrates and/or digoxin without evidence of clinically significant adverse interactions. No clinically important pharmacokinetic interactions occurred when ZESTRIL was used concomitantly with propranolol or hydrochlorothiazide. The presence of food in the stomach does not alter the bioavailability of ZESTRIL.

Agents Increasing Serum Potassium: ZESTRIL attenuates potassium loss caused by thiazide-type diuretics. Use of ZESTRIL with potassium-sparing diuretics (eg, spironolactone, triamterene or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium.

Lithium: Lithium toxicity has been reported in patients receiving lithium in combination with thiazide-type diuretics, including ACE inhibitors. Lithium toxicity was usually reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if ZESTRIL is administered concomitantly with lithium.

Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a tumorigenic effect when lisinopril was administered for 105 weeks to male and female rats at doses up to 90 mg/kg/day (about 56 times* the maximum recommended daily human dose) or when lisinopril was administered for 92 weeks to (male and female) mice at doses up to 135 mg/kg/day (about 84 times* the maximum recommended daily human dose).

*Based on patient weight of 50 kg.

Zestril® (lisinopril)

Lisinopril was not mutagenic in the Ames microbial mutagen test with or without metabolic activation. It was also negative in a forward mutation assay using Chinese hamster lung cells. Lisinopril did not produce single strand DNA breaks in an *in vitro* alkaline elution rat hepatocyte assay. In addition, lisinopril did not produce increases in chromosomal aberrations in an *in vitro* test in Chinese hamster ovary cells or in an *in vivo* study in mouse bone marrow.

There were no adverse effects on reproductive performance in male and female rats treated with up to 300 mg/kg/day of lisinopril.

Pregnancy: Pregnancy Category D. See WARNINGS, Fetal/Neonatal Morbidity and Mortality.

Nursing Mothers: Milk of lactating rats contains radioactively following administration of ¹⁴C-lisinopril. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when ZESTRIL is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: ZESTRIL has been found to be generally well tolerated in controlled clinical trials involving 2003 patients and subjects.

The most frequent clinical adverse experiences in controlled trials with ZESTRIL were dizziness (6.3%), headache (5.3%), fatigue (3.3%), diarrhea (3.2%), upper respiratory symptoms (3.0%), and cough (2.9%), all of which were more frequent than in placebo-treated patients. For the most part, adverse experiences were mild and transient in nature. Discontinuation of therapy was required in 6.0% of patients. In clinical trials, the overall frequency of adverse experiences could not be related to total daily dosage within the recommended therapeutic dosage range.

For adverse experiences which occurred in more than 1% of patients and subjects treated with ZESTRIL or ZESTRIL plus hydrochlorothiazide in controlled clinical trials, comparative incidence data are listed in the table below.

	Percent of Patients in Controlled Studies	
	ZESTRIL (n=2003) Incidence (discontinuation)	Placebo (n=207) Incidence (discontinuation)
Dizziness	6.3 (0.6)	9.0 (0.9)
Headache	5.3 (0.2)	4.3 (0.5)
Fatigue	3.3 (0.2)	3.9 (0.5)
Diarrhea	3.2 (0.3)	2.6 (0.3)
Upper Respiratory Symptoms	3.0 (0.0)	4.5 (0.0)
Cough	2.9 (0.4)	4.5 (0.8)
Nausea	2.3 (0.3)	2.5 (0.2)
Hypotension	1.8 (0.8)	1.6 (0.5)
Rhinitis	1.5 (0.4)	1.6 (0.2)
Orthostatic Effects	1.4 (0.0)	3.4 (0.2)
Asthenia	1.3 (0.4)	2.0 (0.2)
Chest Pain	1.3 (0.1)	1.2 (0.2)
Vomiting	1.1 (0.0)	1.4 (0.0)
Dyspnea	1.1 (0.0)	0.5 (0.2)
Dyspepsia	1.0 (0.0)	1.9 (0.0)
Paresthesia	0.8 (0.0)	2.0 (0.2)
Impotence	0.7 (0.2)	1.6 (0.3)
Muscle Cramps	0.6 (0.0)	2.8 (0.6)
Back Pain	0.5 (0.0)	1.1 (0.0)
Nasal Congestion	0.3 (0.0)	1.2 (0.0)
Decreased Libido	0.2 (0.1)	1.2 (0.0)
Vertigo	0.1 (0.0)	1.1 (0.2)

† Includes 420 patients treated for congestive heart failure who were receiving concomitant diuretics and/or diuretic therapy.

Clinical adverse experiences occurring in 0.3% to 1.0% of patients in the controlled trials and/or serious, possibly drug related events reported in uncontrolled studies or marketing experience are listed below and, within each category, are in order of decreasing severity.

BODY AS A WHOLE: Chest discomfort, fever, flushing, malaise.

CARDIOVASCULAR: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high risk patients (see WARNINGS, Hypotension); angina pectoris, orthostatic hypotension, rhythm disturbances, tachycardia, peripheral edema, vasculitis, palpitation.

DIGESTIVE: Pancreatitis, hepatitis (hepatocellular or cholestatic jaundice), abdominal pain, anorexia, constipation, flatulence, dry mouth.

METABOLISM: Gout.

MUSCULOSKELETAL: Joint pain, shoulder pain.

NERVOUS SYSTEM/PSYCHIATRIC: Depression, somnolence, insomnia, stroke, nervousness, confusion.

RESPIRATORY SYSTEM: Bronchitis, sinusitis, pharyngeal pain.

SKIN: Urticaria, pruritus, diaphoresis.

SPECIAL SENSES: Blurred vision.

UROGENITAL: Oliguria, progressive azotemia, acute renal failure, urinary tract infection.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgia/arthritis, myalgia and fever.

ANGIOEDEMA: Angioedema has been reported in patients receiving ZESTRIL (0.1%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis and/or larynx occurs, treatment with ZESTRIL should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

HYPOTENSION: In hypertensive patients, hypotension occurred in 1.2% and syncope occurred in 0.1% of patients. Hypotension or syncope was a cause of discontinuation of therapy in 0.5% of hypertensive patients. (See WARNINGS.)

In patients with congestive heart failure, hypotension occurred in 5.0% and syncope occurred in 1.0% of patients. These adverse experiences were causes for discontinuation of therapy in 1.3% of these patients.

Fetal/Neonatal Morbidity and Mortality: In infants exposed to ACE inhibitors the following adverse experiences have been reported: Fetal and neonatal death, renal failure, hypoplastic lung development, hypotension, hyperkalemia, skull hypoplasia, limb contractures, craniofacial deformities, intrauterine growth retardation, prematurity and patent ductus arteriosus. (See WARNINGS, Fetal/Neonatal Morbidity and Mortality.)

Clinical Laboratory Test Findings: Serum Electrolytes: Hyperkalemia. (See PRECAUTIONS.)

Creatinine, Blood Urea Nitrogen: Minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 2.0% of patients with essential hypertension treated with ZESTRIL alone. Increases were more common in patients receiving concomitant diuretics and in patients with renal artery stenosis. (See PRECAUTIONS.) Reversible minor increases in blood urea nitrogen and serum creatinine were observed in approximately 9.1% of patients with congestive heart failure on concomitant diuretic therapy. Frequently, these abnormalities resolved when the dosage of the diuretic was decreased.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.4 g% and 1.3 vol%, respectively) occurred frequently in patients treated with ZESTRIL but were rarely of clinical importance in patients receiving blood pressure just prior to dosing to detect whether satisfactory control is being maintained for 24 hours. If it is not, an increase in dose should be considered. Doses up to 80 mg have been used but do not appear to give greater effect. If blood pressure is not controlled with ZESTRIL alone, a low dose of a diuretic may be added. Hydrochlorothiazide, 12.5 mg has been shown to provide an additive effect. After the addition of a diuretic, it may be possible to reduce the dose of ZESTRIL.

Diuretic Treated Patients: In hypertensive patients who are currently being treated with a diuretic, symptomatic hypotension may occur occasionally following the initial dose of ZESTRIL. The diuretic should be discontinued, if possible, for two to three days before beginning therapy with ZESTRIL to reduce the likelihood of hypotension. (See WARNINGS.) The dosage of ZESTRIL should be adjusted according to blood pressure response. If the patient's blood pressure is not controlled with ZESTRIL alone, diuretic therapy may be resumed as described above.

If the diuretic cannot be discontinued, an initial dose of 5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

Concomitant administration of ZESTRIL with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium. (See PRECAUTIONS.)

Use in Elderly: In general, blood pressure response and adverse experiences were similar in younger and older patients given similar doses of ZESTRIL. Pharmacokinetic studies, however, indicate that maximum blood levels and area under the plasma concentration time curve (AUC) are doubled in older patients so that dosage adjustments should be made with particular caution.

Dosage Adjustment in Renal Impairment: The usual dose of ZESTRIL (10 mg) is recommended for patients with creatinine clearance < 30 mL/min (serum creatinine > 3 mg/dL), the first dose is 5 mg only daily. For patients with creatinine clearance < 10 mL/min (usually on hemodialysis) the recommended initial dose is 2.5 mg. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Renal Status	Creatinine Clearance mL/min	Initial Dose mg/day
Normal Renal Function to Mild Impairment	>30	10
Moderate to Severe Impairment	≥10 <30	5
Dialysis Patients	<10	2.5*

* Dosage or dosing interval should be adjusted depending on the blood pressure response.

HOW SUPPLIED

5 mg Tablets (NDC 0038-0130) pink, round, biconvex, uncoated, scored tablets, identified "ZESTRIL 5" debossed on one side, and "130" debossed and scored on the other side are supplied in bottles of 100 tablets and unit dose packages of 100 tablets.

10 mg Tablets (NDC 0038-0131) pink, round, biconvex, uncoated tablets identified "ZESTRIL 10" debossed on one side, and "131" debossed on the other side are supplied in bottles of 100 tablets and unit dose packages of 100 tablets.

20 mg Tablets (NDC 0038-0132) red, round, biconvex, uncoated tablets identified "ZESTRIL 20" debossed on one side, and "132" debossed on the other side are supplied in bottles of 100 tablets and unit dose packages of 100 tablets.

40 mg Tablets (NDC 0038-0134) yellow, round, biconvex, uncoated tablets identified "ZESTRIL 40" debossed on one side, and "134" debossed on the other side are supplied in bottles of 100 tablets and unit dose packages of 100 tablets.

Store at room temperature. Protect from moisture, freezing and excessive heat. Dispense in a tight container.

Rev V 01/91

STUART PHARMACEUTICALS
A business unit of ICI Americas Inc.
Wilmington, Delaware 19897 USA

Fast, powerful relief for pain/inflammation.

Sprains & Strains

An anatomical illustration of a human knee joint, showing the bones, ligaments, and tendons. The joint is depicted in a dark, shadowed environment, with a bright red light source illuminating the area of the injury, which appears to be the ligamentous structure. A blue light source is also visible, casting a beam across the joint. The overall effect is one of intense focus on the affected area.

Helps trauma patients get back to work faster.¹

No oral analgesic works faster—onset of pain relief may occur as fast as 20 minutes

Pain relief as powerful as the codeine combinations and propoxyphene napsylate²

Potent anti-inflammatory effect helps promote return to full function by reducing swelling and inflammation¹

Fast Relief. Fast Recovery.

550 MG TABLETS

Anaprox[®] DS

(NAPROXEN SODIUM)

- 
1. Ogilvie-Harris DJ, et al: Prostaglandin inhibition and the rate of recovery after arthroscopic meniscectomy. *J Bone Joint Surg* 1985;67-B:567-571.
 2. Scoren RD, et al: Pain following periodontal surgery: Treatment with a non-narcotic analgesic compared with two codeine combinations. *Curr Ther Res* 1987;42:463-471.

For brief summary of prescribing information, please see next page.

 **SYNTEX**
SYNTEX PUERTO RICO, INC.
HUMACAO, P.R. 00861

© 1990 Syntex Puerto Rico, Inc.
811-H2-386-90

Brief Summary:

Contraindications: Patients who have had allergic reactions to NAPROSYN, ANAPROX or ANAPROX DS or in whom aspirin or other NSAIDs induce the syndrome of asthma, rhinitis, and nasal polyps. Because anaphylactic reactions usually occur in patients with a history of such reactions, question patients for asthma, nasal polyps, urticaria, and hypotension associated with NSAIDs before starting therapy. If such symptoms occur, discontinue the drug.

Warnings: Serious GI toxicity such as bleeding, ulceration, and perforation, can occur at any time, with or without warning symptoms, in patients treated chronically with NSAIDs. Remain alert for ulceration and bleeding even in the absence of previous GI tract symptoms. In clinical trials, symptomatic upper GI ulcers, gross bleeding or perforation occur in about 1% of patients treated for 3-6 months, and in about 2-4% of patients treated for one year. Inform patients of signs and/or symptoms of serious GI toxicity and what steps to take if they occur. Studies have not identified any subset of patients not at risk of developing peptic ulceration and bleeding. Except for a prior history of serious GI events and other risk factors associated with peptic ulcer disease, such as alcoholism, smoking, etc., no risk factors (e.g., age, sex) have been associated with increased risk. Elderly or debilitated patients seem to tolerate ulceration or bleeding less well and most spontaneous reports of fatal GI events are in this population. In considering the use of relatively large doses (within the recommended dosage range), sufficient benefit should be anticipated to offset the potential increased risk of GI toxicity.

Precautions: DO NOT GIVE NAPROSYN® (NAPROXEN) CONCOMITANTLY WITH ANAPROX® OR ANAPROX® DS (NAPROXEN SODIUM) SINCE THEY CIRCULATE IN PLASMA AS THE NAPROXEN ANION. Acute interstitial nephritis with hematuria, proteinuria, and nephrotic syndrome has been reported. Patients with impaired renal function, heart failure, liver dysfunction, patients taking diuretics, and the elderly are at greater risk of overt renal decompensation. If this occurs, discontinue the drug. Use with caution and monitor serum creatinine and/or creatinine clearance in patients with significantly impaired renal function. Use the lowest effective dose in the elderly or in patients with chronic alcoholic liver disease or cirrhosis. Borderline elevations of liver tests may occur in up to 15% of patients. Elevations of SGPT or SGOT occurred in controlled trials in less than 1% of patients. Severe hepatic reactions, including jaundice and fatal hepatitis, have been reported rarely. If liver disease develops or if systemic manifestations occur (e.g., eosinophilia or rash), discontinue therapy. If steroid disease is reduced or eliminated during therapy, do so slowly and observe patients closely for adverse effects, including adrenal insufficiency and exacerbation of arthritis symptoms. Determine hemoglobin values periodically for patients with initial values of 10 grams or less who receive long-term therapy. Peripheral edema has been reported. For patients with restricted sodium intake, note that each tablet contains approximately 25 or 50 mg (1 or 2 mEq) sodium. Use with caution in patients with fluid retention, hypertension or heart failure. The drug may reduce fever and inflammation, diminishing their diagnostic value. Conduct ophthalmic studies if any change or disturbance in vision occurs. **Information for Patients:** Side effects can cause discomfort and, rarely, more serious side effects, such as GI bleeding, may result in hospitalization and even fatal outcomes. Physicians may wish to discuss with patients potential risks and benefits of NSAIDs, particularly when they are used for less serious conditions where treatment without NSAIDs may be acceptable. Patients should use caution for activities requiring alertness if they experience drowsiness, dizziness, vertigo or depression during therapy.

Laboratory Tests: Because serious GI tract ulceration and bleeding can occur without warning symptoms, follow chronically treated patients and inform them of the importance of the follow-up. **Drug Interactions:** Use caution when giving concomitantly with coumarin-type anticoagulants; a hydantoin, sulfonamide or sulfonylurea, furosemide, lithium, beta-blockers; probenecid; or methotrexate. **Drug/Laboratory Test Interactions:** May decrease platelet aggregation and prolong bleeding time or increase urinary values for 17-ketogenic steroids. Temporarily stop therapy for 72 hours before adrenal function tests. May interfere with urinary assays of SHIAA. **Carcinogenesis:** A 2-year rat study showed no evidence of carcinogenicity. **Pregnancy:** Category B. Do not use during pregnancy unless clearly needed. Avoid use during late pregnancy. **Nursing Mothers:** Avoid use. **Pediatric Use:** Single doses of 2.5-5 mg/kg (as naproxen suspension), with total daily dose not exceeding 15 mg/kg/day, are safe in children over 2 years of age.

Adverse Reactions: In a study, GI reactions were more frequent and severe in rheumatoid arthritis patients on 1650 mg/day naproxen sodium than in those on 825 mg/day. In children with juvenile arthritis, rash and prolonged bleeding times were more frequent. GI and CNS reactions about the same, and other reactions less frequent than in adults. Incidence Greater Than 1%, Probable Causal Relationship: GI: The most frequent complaints related to the GI tract: constipation, heartburn, abdominal pain, nausea, dyspepsia, diarrhea, stomatitis. CNS: headache, dizziness, drowsiness, light-headedness, vertigo. Dermatologic: itching (pruritus), skin eruptions, ecchymoses, sweating, purpura. Special Senses: tinnitus, hearing disturbances, visual disturbances. Cardiovascular: edema, dyspnea, palpitations. General: thirst. *Incidence of reported reaction 3%-9%. Where unmarked, incidence less than 3%. Incidence Less Than 1%: Probable Causal Relationship: GI: abnormal liver function tests, colitis, GI bleeding and/or perforation, hematemesis, jaundice, melena, peptic ulceration with bleeding and/or perforation, vomiting. Renal: glomerular nephritis, hematuria, hyperkalemia, interstitial nephritis, nephrotic syndrome, renal disease, renal failure, renal papillary necrosis. Hematologic: agranulocytosis, eosinophilia, granulocytopenia, leukopenia, thrombocytopenia. CNS: depression, dream abnormalities, inability to concentrate, insomnia, malaise, myalgia and muscle weakness. Dermatologic: alopecia, photosensitive dermatitis, skin rashes. Special Senses: hearing impairment. Cardiovascular: congestive heart failure. Respiratory: eosinophilic pneumonitis. General: anaphylactoid reactions, menstrual disorders, pyrexia (chills and fever). Causal Relationship Unknown: Hematologic: aplastic anemia, hemolytic anemia. CNS: aseptic meningitis, cognitive dysfunction. Dermatologic: epidermal necrolysis, erythema multiforme, photosensitivity reactions resembling porphyria cutanea tarda and epidermolysis bullosa, Stevens-Johnson syndrome, urticaria. GI: non-peptic GI ulceration, ulcerative stomatitis. Cardiovascular: vasculitis. General: angioneurotic edema, hypoglycemia, hypoglycemia.

Overdose: May have drowsiness, heartburn, indigestion, nausea, vomiting. A few patients have had seizures. Empty stomach and use usual supportive measures. In animals 0.5 g/kg of activated charcoal reduced plasma levels of naproxen.

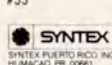
Dosage and Administration for Mild to Moderate Pain, Dysmenorrhea and Acute Tendinitis and Bursitis: Recommended starting dose is 550 mg, followed by 275 mg every 6 to 8 hours. Total daily dose should not exceed 1375 mg. **Dosage and Administration for Rheumatoid Arthritis, Osteoarthritis and Ankylosing Spondylitis:** Recommended dose in adults is 275 mg or 550 mg twice daily. In patients who tolerate lower doses well, the dose may be increased to 1650 mg per day for limited periods when a higher level of anti-inflammatory/analgesic activity is required. At this dosage, physicians should observe sufficient increased clinical benefits to offset potential increased risk.

Caution: Federal law prohibits dispensing without prescription.

See package insert for full Prescribing Information.

Revised 9/90

#33

 SYNTEX
SYNTEX PUERTO RICO, INC.
HUMACAO, P.R. 00861

Anaprox® DS
(NAPROXEN SODIUM)

© 1990 Syntex Puerto Rico, Inc.

Announcements

American Heart Association

The American Heart Association is making available reprints of an article entitled "Guidelines for Treatment of Acute Myocardial Infarction," published simultaneously by the American Academy of Cardiology and the American Heart Association in the August 1990 issues of *Circulation* and the *Journal of the American College of Cardiology*.

Up to five copies are available free of charge. Additional copies can be purchased for \$1 per copy. Send requests to Eleanor A. Sanders, Manager of Scientific Statements, American Heart Association, 7320 Greenville Ave., Dallas, TX 75231.

Award for Best Paper on Preventive Medicine

The American Journal of Preventive Medicine and the Ulrich and Ruth Frank Foundation for International Health announce an award for the best papers on the topic of preventive medicine.

One award will be made in each category (to a resident in any specialty, a medical student from any accredited school of medicine or osteopathy, and a graduate student in public health from any public health program that is part of an accredited medical school). There will be a total of three cash awards: first prize is \$1000; second prize, \$500; and third prize, \$250.

The American Journal of Preventive Medicine will publish abstracts from all three prize-winning papers and will consider publishing (after editorial review) additional text from all papers. Any prevention-oriented topic will be considered for prizes (especially, although not exclusively, papers on the environment and on overpopulation). Awardees will be honored at the Prevention '92 conference.

For further information, write to Erica Frank, MD, MPH, Stanford Center

for Research in Disease Prevention, 1000 Welch Rd, Palo Alto, CA 94304-1885. Deadline for submission of papers is October 21, 1991.

European Medical Partnerships Sought: US AID

The US Agency for International Development (US AID) is soliciting proposals for partnerships between medical facilities in the United States and those in Central and Eastern Europe. Up to 10 grants are expected to be awarded by US AID in support of such partnerships during 1991. It also is expected that grants will range between \$1.5 and \$2.5 million and will be extended from 2 to 3 years.

Applications are welcomed from community and municipal hospitals, university teaching hospitals or tertiary health care facilities, and for-profit and non-profit institutions.

Priority areas of assistance are cardiovascular and cerebrovascular diseases, cancer, pediatric trauma, emergency medical systems, and medical effects of environmental pollution. Partnership activities might include training, utilization and outcome research, diagnostic and treatment improvements, and outpatient prevention programs. Target countries are Poland, Hungary, Czechoslovakia, Yugoslavia, Bulgaria, and Romania. Partnerships will focus on a single area of medical assistance in a single country.

To obtain a copy of Request for Application Number OS/EE/91-009, send a written request with two self-addressed mailing labels to The Agency for International Development, Office of Procurement, Overseas Division, Room 1583, SA-14, Washington, DC 20523-1420; attention: Mr James Loy; telephone (703) 875-1041.

Please indicate in your request the Central or Eastern European country of priority interest to your institution; US AID will share this information with other requestors unless directed not to.

HHS Secretary Louis Sullivan speaks out for improved health

Next month, Louis W. Sullivan, MD, the Secretary of Health and Human Services, will return to his hometown of Blakely, Ga, a rural town of 1100 in the southwestern corner of the state, to address the graduating high school class.

It will be a sweet moment for the 57-year-old physician and Cabinet member. Sullivan himself never attended the high school because he grew up in an area where blacks were occasionally lynched and during an era when blacks were always forced to go to segregated schools.

Things have improved in Blakely over the years, but Sullivan's parents wanted him to have a better education than the meager offerings provided in his hometown back in the 1940s. He and his older brother, Walter, were sent to live with relatives in Atlanta, where they completed junior high and Booker T. Washington High School.

Sullivan's mother was a schoolteacher who insisted on a solid education for her sons, and his father, an insurance salesman and undertaker, was a hard-working man who helped form a chapter of the National Association for the Advancement of Colored People. His father joined the NAACP for self-protection from marauding racists, Sullivan recalls. The father also "never took a day of vacation in his life," according to his son.

From the start, the future Dr Sullivan knew that he was on a mission.

"I knew that I wanted to be a doctor from the time I was about 5 years old," Sullivan told this reporter during a recent interview in his majestic office in the Hubert H. Humphrey Building near Capitol Hill in Washington, DC. He added, though, with the hearty chuckle that is his trademark, "I always thought that I would be a family physician practicing in a rural area like Blakely. In that sense, my entire medical career has gone awry."

Awry, indeed. It will be with an acquired Boston accent that Sullivan will

deliver that commencement address to residents of the rural Georgia town where he was born. He will also come home with the imposing credentials of a respected medical academician and researcher, former medical school dean and president, and, now, controversial federal Cabinet officer.

From academics to politics

Sullivan got to HHS in a roundabout fashion and took over this uniquely political position on the strength of his personal drive and academic and personal qualifications, not political IOUs.

After graduating magna cum laude from Atlanta's Morehouse College in 1954 and earning his medical degree, cum laude, from Boston University in 1958, Sullivan completed his internship (1958-1959) and residency (1959-1960) in internal medicine at the New York Hospital-Cornell Medical Center. After a fellowship in pathology (1960-1961) at Massachusetts General Hospital, he became a fellow in hematology at the Thorndike Memorial Research Laboratories of Harvard Medical School at Boston City Hospital. He was also an instructor of medicine at Harvard Medical School from 1963 to 1964 and an assistant professor of medicine at the New Jersey College of Medicine from 1964 to 1966.

In 1966, he began his ascent up the academic medicine ladder by signing on as codirector of hematology at the Boston University Medical Center. "My only goal was to become chairman of a department of medicine before I was 45," he recalls.

From 1966 to 1975, his rise was relentless, as he became, successively, assistant professor of medicine, associate professor, and professor. From 1972 to 1975, he also was the project director of the Boston Sickle Cell Center and director of hematology at Boston City Hospital. The study of blood disorders was his passion, and he made original research contributions toward the understanding of sickle cell anemia, vitamin B₁₂

deficiencies, and the effect of alcohol on blood cells.

In 1975, however, he made a quantum leap by returning home to become the founding dean and director of the Medical Education Program at his alma mater, Morehouse College.

During the next 10 years, Sullivan transformed the dream into reality by converting a program operating out of two trailers into a fully accredited 4-year medical school that awarded the MD degree to its first 16 graduates in 1985. Along the way, Sullivan became dean and president of the new medical school and developed a reputation, according to published profiles, for great expectations and "a great big ego."

By the time he resigned in 1989 as president of the Morehouse School of Medicine, he was, according to a profile in the *Washington Post*, "demanding—and getting—\$200,000 a year, and that represented a scaled-back demand." Most observers, the newspaper reported, believed he was well worth it. Typically, he was described as a "driven workaholic."

The opportunity to run HHS, the newspaper reported, grew out of Sullivan's friendship with President George Bush and Mrs Barbara Bush, a friendship that developed because of Sullivan's patience, persistence—and political instincts.

Realizing the potential political symbolism, Sullivan had been after then-President Ronald Reagan to come down and help dedicate his new medical school, but again and again he was rebuffed. He continued his requests, however, until then-Vice President Bush was dispatched to Atlanta in 1985 to christen the new school's first building. That visit led to a friendship, Mrs Bush joined the medical school's board, and, on March 10, 1989, Sullivan was sworn in as secretary of HHS.

Sullivan is the second black (following Patricia Harris) and second physician (following Otis Bowen, MD) to run HHS, but he is the only HHS secretary

who actually once had a research grant from the National Institutes of Health (NIH), the research arm of HHS.

As HHS secretary, Sullivan is in charge of an enormous budget that is the fourth highest in the world—surpassed only by the budgets of the *entire governments* of the United States, Soviet Union, and Japan. The HHS annual budget is \$425 billion, and it commands a staff of 118 000. His empire includes the Social Security Administration, US Public Health Service, Health Care Financing Administration (which funds Medicare and Medicaid), and a grab bag of both public assistance and human development programs. Almost 95% of all moneys paid out by HHS are for fixed entitlement programs.

Sullivan came to Washington to run this elephantine operation as a political outsider, but during the past 2 years he has stirred things up with his strong views on changing unhealthy life-style habits like drinking and smoking, improving access to care, and reducing its cost.

He will work hard for his beliefs. "My beloved mentor and role model," he said, "is the late Dr Benjamin Elijah Mays. He was the son of slaves and he had to teach himself how to read and write and, yet, he earned a PhD from the University of Chicago. He was president of Morehouse College from 1940 to 1967, and he used to talk to his students every Monday morning.

"He impressed upon us that it was not the outside environment that would determine our success, or lack of success, but, rather, the inner environment of the quality of our discipline, our work habits, our service to others, and the strength of the dreams in our hearts. He taught us to work hard for our beliefs and to make sure that our qualifications were so solid that we would 'have' to be considered for any position that we might seek and that, if unsuccessful, it would not be for lack of qualifications."

This is Sullivan's credo, and, as HHS chief, he has articulated three broad themes: the development of a new "culture of character," by which he means a new emphasis on prevention and personal responsibility for changing unhealthy life-styles; the widening of access to care to meet the "morally appropriate" goal of providing *needed* medical care to all Americans; and to hold down the rapid rise in the cost of medical care.

He is a gracious man who speaks in a smoothly modulated and Eastern-accented voice, occasionally punctuated by a large-sized laugh. Whatever the question, he tends to begin, "Roight, roight . . .," and then proceed to make



Photo: Anna Ng for JAMA

Dr Louis Sullivan, shown here in his Washington, DC, office, has traveled the nation, calling for a new "culture of character."

his arguments.

"Everything we do here can be summed in one word," Sullivan says, "and that word is 'family.' Almost all of our 250 programs are designed to help the family, to keep the family together, or to substitute for the breakdown of the family. That's why I am calling for a new culture of character and personal responsibility."

It is a challenging goal.

"Every 60 seconds, a baby is born to a teen-aged mother," Sullivan notes, "and 20% of all white babies, 30% of all Hispanic babies, and 70% of all black babies will be raised in single-parent homes. This usually begins a cycle of poverty and poor health. The leading cause of death among young blacks 15 to 19 is homicide—blacks killing blacks—and this is usually linked to the breakdown of the black family and the lack of proper male role models."

He is also a strong critic of this nation's drinking and smoking habits. "Alcohol costs us \$70 billion a year," he says. "It causes half of the 30 000 auto

accident deaths every year, 40% of the drownings, and is the leading cause of cirrhosis of the liver, which is the ninth leading cause of death in the US. Alcohol also is linked to our high rates of homicides, suicides, and violence."

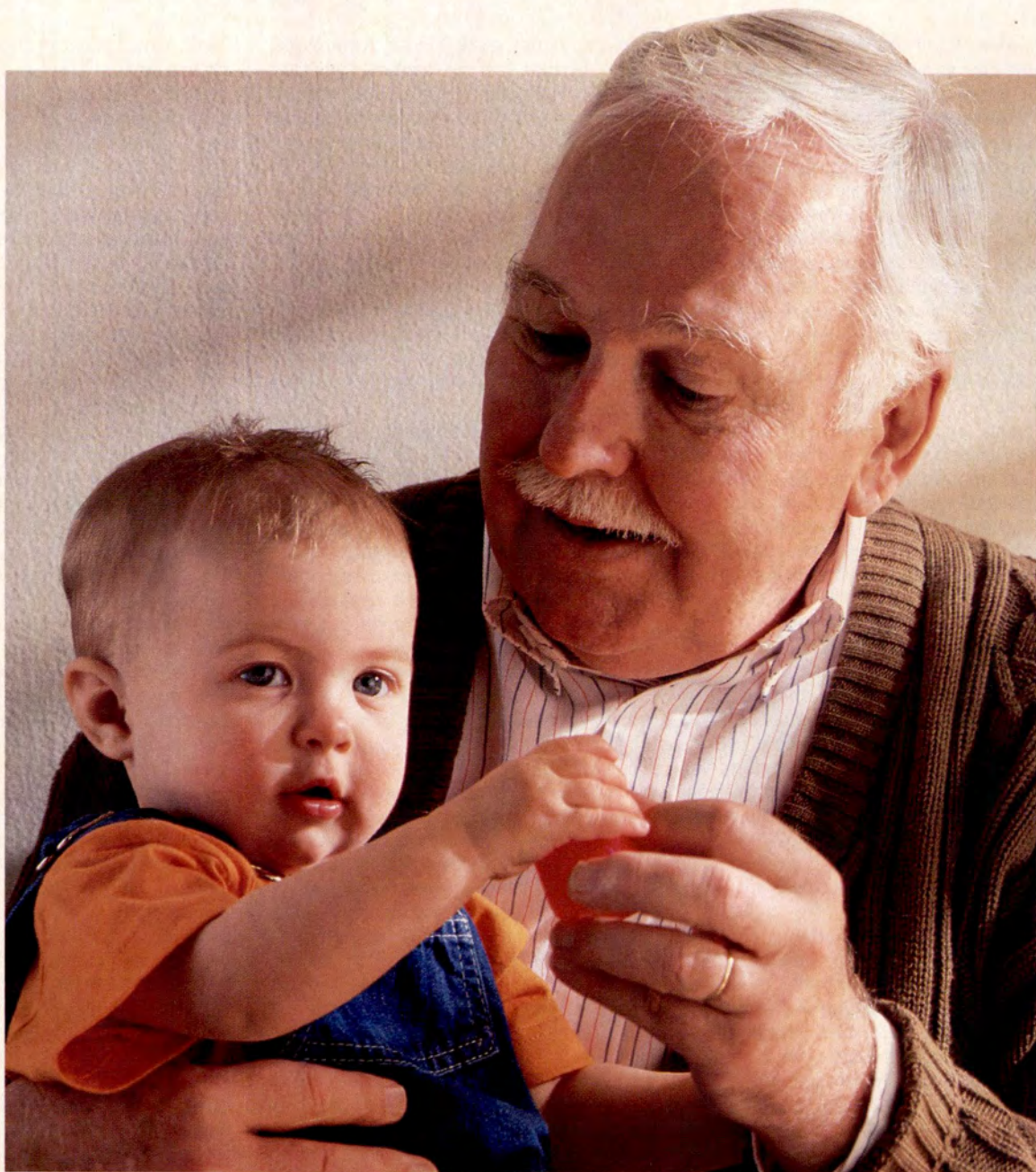
The HHS secretary recently provoked headlines when he called for a boycott of tobacco-sponsored sports events, but he is sticking to his guns.

"Smoking is our No. 1 *preventable* cause of death," he says. "The toll from smoking is 390 000 deaths a year, including 87% of all deaths from lung cancer, 21% of all deaths from heart disease, and 30% of all deaths from cancer. Smoking is also to blame for 20% to 30% of all low-birth-weight babies. This habit costs the nation \$52 billion a year in death and disability."

Sullivan also singles out improper diets and lack of exercise as among the behavioral and life-style factors that have put Americans on a path toward poor health.

He concludes, "We have come to view

(Continued on p 2576.)



SUPRAX[®]

cefixime/Lederle
Suspension & Tablets



Lederle Laboratories
A Division of American Cyanamid Company
Wayne, New Jersey 07470



Under License of
Fujisawa Pharmaceutical Co., Ltd.
Osaka, Japan

(Continued from p 2574.)

medicine as a safety net, as a fix-it shop for our sloppy life-styles, and this cannot be sustained. During this century, medicine has managed to eliminate the infectious and vitamin-deficiency diseases that used to cause most deaths. The exceptions, of course, are viral diseases, like AIDS. Our remaining challenge is to better manage chronic diseases that build over a lifetime, and the individual patient holds one key to achieving this goal—following a healthy life-style."

The secretary practices what he preaches. He neither smokes nor drinks, bypasses red meat in favor of chicken and seafood, and works out regularly at a fitness center. He also makes time for a daily long walk with his wife of 33 years, Ginger (so named after her favorite drink, ginger ale). The Sullivans are known as a straight-arrow couple who are regularly seen holding hands at Washington social events. Sullivan's only vice, it appears, is his workaholic ways.

He wants MDs to take a bigger role in preventive medicine and intends to accomplish this by "emphasizing prevention in medical school; by changing reimbursement policies to pay physicians more for preventive services and primary care; and by persuading MDs to work closer with allied health professionals and corporate America to promote wellness programs."

When it comes to improving access to and lowering the cost of medical care, the secretary faces a challenge at least as great as persuading Americans to adopt healthier life-styles. Indeed, cynics have suggested that the Bush Administration and Secretary Sullivan are emphasizing prevention and personal responsibility for health *precisely* because they do not have any solutions to the thornier problems of access and cost.

Best care, but not for all

Sullivan says that the Administration's formal health policy proposals are still under development. In the meantime, he has been traveling across the country carrying on a dialogue with physicians and policymakers and using his office as a bully pulpit to express his views.

"In America," he says, "we have the best-trained physicians in the world. We also have the best biomedical research facilities, and spend the most money on medical care. We must never forget what American medicine has accomplished—the end of childhood diseases like measles and polio, the advent of miracle drugs and organ transplants.

"The problem is that this superb sys-

tem does not work for *all* Americans. The figures can be argued, whether there are 37 million Americans without adequate health insurance or 33 million or 31 million, but, clearly, any number in the millions is unacceptable.

"In 1990, the nation spent \$650 billion on health care, or 12% of our gross national product. This represents \$2600 for every man, woman, and child in the nation, and it *ought* to be enough to provide access for all. Yet, it is not, and as costs rise, and as de facto rationing increases, then all of us—the uninsured and insured alike—will get less medical care."

The problem, Sullivan emphasizes, is not so much lack of health insurance as lack of access to needed care. "Money alone will not solve the problem," he emphasizes, going so far as to suggest, "Research into the appropriateness and outcome of medical treatments indicates that even those with virtually unlimited financial access do not always get the care they need."

Turning to the problem of uninsurance, the HHS secretary says, "The problem is usually not that the patients are poor, but that their employers do not offer health insurance, usually because the employers themselves cannot afford to do so."

The HHS estimates that one third of all uninsured are the so-called working poor who have jobs and income above the poverty line but either are not provided health insurance by their employers or cannot afford health insurance; that another third, usually unemployed, have income below the poverty line and are dependent upon Medicaid and charity care; and that the final third have adequate income but either elect not to buy health insurance or are barred by preexisting medical conditions.

Sullivan concludes, "National health insurance is not the answer, but we must do more as a nation to meet the needs of those without access to care." In general, he believes the answer lies in a significant reform of this nation's existing web of group health insurance plans—our complex system of cross-subsidies. The haves (those who remain healthy while paying insurance premiums and/or who can pay the going rate for needed care) will continue to subsidize the have-nots.

Proposals under consideration, he says, are reimbursement incentives to emphasize primary care over high-tech specialized care; taxing the employee health benefits provided by employers and using the estimated \$58 billion in tax savings to pay for care of the poor; reforming the market so that small employers of 25 or fewer can compete for

health insurance; reducing the cost of professional liability and "defensive medicine"; and targeting funds for specific programs, such as a campaign to reduce infant mortality.

This summer marks the 25th anniversary of Medicare and Medicaid, the two giant government programs that *have* expanded access to medical care, though at a very high cost. "On balance," Sullivan says, "the programs are a plus, with Medicare more so and Medicaid more a mosaic of widely varying state plans."

The HHS secretary added that while he is sympathetic to physician complaints and frustration over Medicare's "hassle factor" and paper chase, he is also mindful of ineffective or unproven medical care and the big moneys paid by Medicare to physicians.

He elaborates, "A former Harvard Medical School dean once told the graduating medical class, 'Half of what we have taught you is wrong. Unfortunately, we do not know which half!'"

"Well, we all have heard estimates such as that 20% or more of hospital days may be unnecessary, that 50% of prescribed antibiotics are probably unneeded or misused, and that too many coronary artery bypass grafts lack clear medical justification. The best we can say is that the number and cost of patient care procedures and interventions undertaken by physicians and other health care providers that are of unproven medical necessity and effectiveness are unknown but substantial.

Physicians are 'entitled,' too

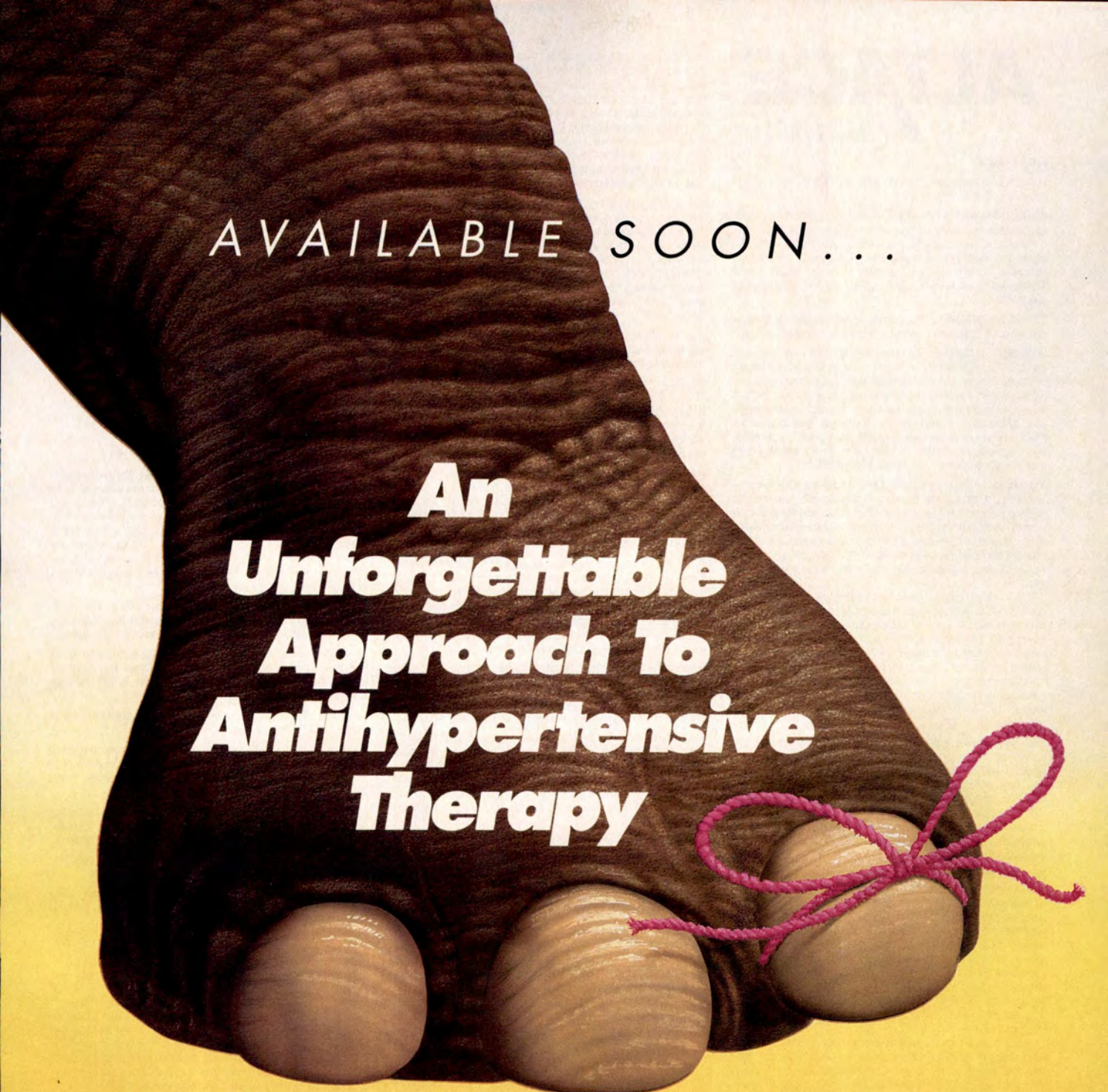
"Also, Medicare Part B—the part that pays for physician services—has grown from \$8 billion in 1980 to \$31 billion in 1990, making it the fastest-growing entitlement program in the federal government. At this rate of increase, payments to physicians would by the year 2005 outrun payments to Social Security beneficiaries!"

This cannot happen, he adds. Possible solutions, the secretary says, are the physician payment reform proposals currently under debate and a new emphasis on research into the effectiveness of various medical procedures and their outcomes. These, like the others, are tough issues.

So, the secretary is asked, what does he *really* think of this new twist in a career that went awry?

He laughs long and loudly. "I've never been so busy in my life," he concludes. "I have strong feelings, and I'm going to work hard for my beliefs. Generally, I'm quite encouraged and optimistic."

"This job is all that I hoped for—and more." □



AVAILABLE SOON...

**An
Unforgettable
Approach To
Antihypertensive
Therapy**

ALTACETM
ramipril

Please see brief summary of prescribing information on following page.

ALTACETM

ramipril

BRIEF SUMMARY

ALTACE is available in potencies of 1.25 mg, 2.5 mg, 5 mg, and 10 mg in color-coded, hard gelatin capsules.

INDICATIONS AND USAGE: ALTACE is indicated for the treatment of hypertension. It may be used alone or in combination with thiazide diuretics.

In using ALTACE, consideration should be given to the fact that another angiotensin converting enzyme inhibitor, captopril, has caused agranulocytosis, particularly in patients with renal impairment or collagen-vascular disease. Available data are insufficient to show that ALTACE does not have a similar risk. (See WARNINGS.)

CONTRAINDICATIONS: ALTACE is contraindicated in patients who are hypersensitive to this product and in patients with history of angioneurotic edema.

WARNINGS: Angioedema: Angioedema of the face, extremities, lips, tongue, glottis, and larynx has been reported in patients treated with angiotensin converting enzyme inhibitors. Angioedema associated with laryngeal edema can be fatal. If laryngeal stridor or angioedema of the face, tongue, or glottis occurs, treatment with ALTACE should be discontinued and appropriate therapy instituted immediately. **Where there is involvement of the tongue, glottis, or larynx, likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1,000 (0.3 ml to 0.5 ml) should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: ALTACE can cause symptomatic hypotension, after either the initial dose or a later dose when the dosage has been increased. Like other ACE inhibitors, ramipril has been only rarely associated with hypotension in uncomplicated hypertensive patients. Symptomatic hypotension is most likely to occur in patients who have been volume- and/or salt-depleted as a result of prolonged diuretic therapy, dietary salt restriction, dialysis, diarrhea, or vomiting. Volume and/or salt depletion should be corrected before initiating therapy with ALTACE.

In patients with congestive heart failure, with or without associated renal insufficiency, ACE inhibitor therapy may cause excessive hypotension, which may be associated with oliguria or azotemia and, rarely, with acute renal failure and death. In such patients, ALTACE therapy should be started under close medical supervision; they should be followed closely for the first 2 weeks of treatment and whenever the dose of ramipril or diuretic is increased.

If hypotension occurs, the patient should be placed in a supine position and, if necessary, treated with intravenous infusion of physiological saline. ALTACE treatment usually can be continued following restoration of blood pressure and volume.

Neutropenia/Agranulocytosis: Another angiotensin converting enzyme inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients, but more frequently in patients with renal impairment, especially if they also have a collagen-vascular disease such as systemic lupus erythematosus or scleroderma. Available data from clinical trials of ramipril are insufficient to show that ramipril does not cause agranulocytosis at similar rates. Monitoring of white blood cell counts should be considered in patients with collagen-vascular disease, especially if the disease is associated with impaired renal function.

Fetal/Neonatal Morbidity and Mortality: ACE inhibitors can cause fetal and neonatal morbidity and mortality when administered to pregnant women.

When ACE inhibitors have been used during the second and third trimesters of pregnancy, there have been reports of neonatal hypotension, renal failure, skull hypoplasia, and death. Oligohydramnios has also been reported, presumably resulting from decreased fetal renal function; oligohydramnios has been associated with fetal limb contractures, craniofacial malformations, hypoplastic lung development, and intrauterine growth retardation. Prematurity and patent ductus arteriosus have been reported, although it is not clear whether these occurrences were due to the ACE-inhibitor exposure or to the mother's underlying disease. It is not known whether exposure limited to the first trimester can adversely affect fetal outcome.

A patient who becomes pregnant while taking ACE inhibitors, or who takes ACE inhibitors when already pregnant, should be apprised of the potential hazard to her fetus. If she continues to receive ACE inhibitors during the second or third trimester of pregnancy, frequent ultrasound examinations should be performed to look for oligohydramnios. When oligohydramnios is found, ACE inhibitors should generally be discontinued.

Infants with histories of *in utero* exposure to ACE inhibitors should be closely observed for hypotension, oliguria, and hypokalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion. Ramipril could theoretically be removed from the neonatal circulation by exchange transfusion, but no experience with this procedure has been reported.

Ramipril has been shown to increase the incidence of dilated renal pelvises in rat fetuses, to retard birth weights in mice, and to be toxic to pregnant rabbits and pregnant cynomolgus monkeys, but not, in any of those studies, to produce terata or to affect fertility, reproductive performance or pregnancy. On a mg/kg basis, the doses used in these studies were 125–2500 times (in rats), 2500 times (in mice), more than 12 times (in monkeys), and more than twice (in rabbits) the maximum recommended human dose.

PRECAUTIONS: General: Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe congestive heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with angiotensin converting enzyme inhibitors, including ALTACE, may be associated with oliguria and/or progressive azotemia and (rarely) with acute renal failure and/or death. In hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine may occur. Experience with another angiotensin

converting enzyme inhibitor suggests that these increases are usually reversible upon discontinuation of ALTACE and/or diuretic therapy. In such patients renal function should be monitored during the first few weeks of therapy. Some hypertensive patients with no apparent pre-existing renal vascular disease have developed increases in blood urea nitrogen and serum creatinine, usually minor and transient, especially when ALTACE has been given concomitantly with a diuretic. This is more likely to occur in patients with pre-existing renal impairment. Dosage reduction of ALTACE and/or discontinuation of the diuretic may be required. **Evaluation of the hypertensive patient should always include assessment of renal function.**

Hyperkalemia: In clinical trials, hyperkalemia (serum potassium greater than 5.7 mEq/L) occurred in approximately 1% of hypertensive patients receiving ALTACE. In most cases, these were isolated values, which resolved despite continued therapy. None of these patients was discontinued from the trials because of hyperkalemia. Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with ALTACE. (See DRUG INTERACTIONS.)

Impaired Liver Function: Since ramipril is primarily metabolized by hepatic esterases to its active moiety, ramiprilat, patients with impaired liver function could develop markedly elevated plasma levels of ramipril. No formal pharmacokinetic studies have been carried out in hypertensive patients with impaired liver function.

Surgery/Anesthesia: In patients undergoing surgery or during anesthesia with agents that produce hypotension, ramipril may block angiotensin II formation that would otherwise occur secondary to compensatory renin release. Hypotension that occurs as a result of this mechanism can be corrected by volume expansion.

Information for Patients: Angioedema: Angioedema, including laryngeal edema, can occur with treatment with ACE inhibitors, especially following the first dose. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, eyes, lips, tongue, or difficulty in breathing) and to take no more drug until they have consulted with the prescribing physician.

Symptomatic Hypotension: Patients should be cautioned that lightheadedness can occur, especially during the first days of therapy, and it should be reported. Patients should be told that if syncope occurs, ALTACETM (ramipril) should be discontinued until the physician has been consulted.

All patients should be cautioned that inadequate fluid intake or excessive perspiration, diarrhea, or vomiting can lead to an excessive fall in blood pressure, with the same consequences of lightheadedness and possible syncope.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to promptly report any indication of infection (e.g., sore throat, fever), which could be a sign of neutropenia.

Drug Interactions: With Diuretics: Patients on diuretics, especially those in whom diuretic therapy was recently instituted, may occasionally experience an excessive reduction of blood pressure after initiation of therapy with ALTACE. The possibility of hypotensive effects with ALTACE can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with ALTACE. If this is not possible, the starting dose should be reduced.

With Potassium Supplements and Potassium-Sparing Diuretics: ALTACE can attenuate potassium loss caused by thiazide diuretics. Potassium-sparing diuretics (spironolactone, amiloride, triamterene, and others) or potassium supplements can increase the risk of hyperkalemia. Therefore, if concomitant use of such agents is indicated, they should be given with caution, and the patient's serum potassium should be monitored frequently.

With Lithium: Increased serum lithium levels and symptoms of lithium toxicity have been reported in patients receiving ACE inhibitors during therapy with lithium. These drugs should be coadministered with caution, and frequent monitoring of serum lithium levels is recommended. If a diuretic is also used, the risk of lithium toxicity may be increased.

Other: Neither ALTACE nor its metabolites have been found to interact with food, digoxin, or antacid.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of a tumorigenic effect was found when ramipril was given by gavage to rats (up to 500 mg/kg/day for 24 months) or to mice (up to 1,000 mg/kg/day for 18 months). Dosages greatly in excess of those recommended for humans produced hypertrophy of the renal juxtaglomerular apparatus in mice, rats, dogs, and monkeys. No mutagenicity was detected in the Ames test in bacteria, the micronucleus test in mice, unscheduled DNA synthesis in a human cell line, or a forward gene-mutation assay in a Chinese hamster ovary cell line. Several metabolites and degradation products of ramipril were also negative in the Ames test. A study in rats with dosages as great as 500 mg/kg/day did not produce adverse effects on fertility.

Pregnancy: Pregnancy Category D: See WARNINGS.

Nursing Mothers: Ingestion of a single 10 mg oral dose of ALTACE resulted in undetectable amounts of ramipril and its metabolites in breast milk. However, because multiple doses may produce low milk concentrations that are not predictable from single doses, ALTACE should not be administered to nursing mothers.

Geriatric Use: Of the total number of patients who received ramipril in US clinical studies of ALTACE 11.0% were 65 and over while 0.2% were 75 and over. No overall differences in effectiveness or safety were observed between these patients and younger patients, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out.

One pharmacokinetic study conducted in hospitalized elderly patients indicated that peak ramiprilat levels and area under the plasma concentration time curve (AUC) for ramiprilat are higher in older patients.

Pediatric Use: Safety and effectiveness in children has not been established.

ADVERSE REACTIONS: ALTACE has been evaluated for safety in over 4,000 patients with hypertension; of these, 1,230 patients were studied in US controlled trials, and 1,107 were studied in foreign controlled trials. Almost 700 of these patients were treated for at least one year. The overall incidence of reported adverse events was similar in ALTACE and placebo patients. The most frequent clinical side effects (possibly or probably related to study drug) reported by patients receiving ALTACE in US placebo-controlled trials were: headache (5.4%), "dizziness" (2.2%) and fatigue or asthenia (2.0%), but only the last was more common in ALTACE patients than in patients given placebo. Generally, the side effects were mild and transient, and there was no relation to total dosage within the range of 1.25 to 20 mg. Discontinuation of therapy because of a side effect was required in approximately 3% of US patients treated with ALTACE. The most common reasons for discontinuation were: cough (1.0%), "dizziness" (0.5%), and impotence (0.4%).

The side effects considered possibly or probably related to study drug that occurred in US placebo-controlled trials in more than 1% of patients treated with ALTACE are shown below.

PATIENTS IN US PLACEBO CONTROLLED STUDIES

	ALTACE (N = 651)		Placebo (N = 286)	
	n	%	n	%
Headache	35	5.4	17	5.9
"Dizziness"	14	2.2	9	3.1
Asthenia (Fatigue)	13	2.0	2	0.7
Nausea/Vomiting	7	1.1	3	1.0

In placebo-controlled trials, there was also an excess of upper respiratory infection and flu syndrome in the ramipril group. As these studies were carried out before the relationship of cough to ACE inhibitors was recognized, some of these events may represent ramipril-induced cough. In a later 1-year study, increased cough was seen in almost 12% of ramipril patients, with about 4% of these patients requiring discontinuation of treatment. Other adverse experiences reported in controlled clinical trials (in less than 1% of ramipril patients), or rarer events seen in postmarketing experience, include the following (In some, a causal relationship to drug use is uncertain):

Cardiovascular: Symptomatic hypotension (reported in 0.5% of patients in US trials) (see PRECAUTIONS and WARNINGS), syncope (not reported in US trials), angina pectoris, arrhythmia, chest pain, palpitations, and myocardial infarction.

Renal: Some hypertensive patients with no apparent pre-existing renal disease have developed minor, usually transient, increases in blood urea nitrogen and serum creatinine when taking ALTACE, particularly when ALTACE was given concomitantly with a diuretic. (See WARNINGS.)

Angioneurotic Edema: Angioneurotic edema has been reported in 0.3% of patients in US clinical trials. (See WARNINGS.)

Cough: A tickling, dry, persistent, nonproductive cough has been reported with the use of ACE inhibitors. Approximately 1% of patients treated with ALTACE have required discontinuation because of cough. The cough disappears shortly after discontinuation of treatment.

Gastrointestinal: Abdominal pain (sometimes with enzyme changes suggesting pancreatitis), anorexia, constipation, diarrhea, dry mouth, dyspepsia, dysphagia, gastroenteritis, nausea, increased salivation, taste disturbance, and vomiting.

Dermatologic: Apparent hypersensitivity reactions (manifested by dermatitis, pruritis, or rash, with or without fever), photosensitivity, and purpura.

Neurologic and Psychiatric: Anxiety, amnesia, convulsions, depression, hearing loss, insomnia, nervousness, neuralgia, neuropathy, paresthesia, somnolence, tinnitus, tremor, vertigo, and vision disturbances.

Other: arthralgia, arthritis, dyspnea, edema, epistaxis, impotence, increased sweating, malaise, myalgia, and weight gain.

Clinical Laboratory Test Findings: Creatinine and Blood Urea Nitrogen: Increases in creatinine levels occurred in 1.2% of patients receiving ALTACE alone, and in 1.5% of patients receiving ALTACE and a diuretic. Increases in blood urea nitrogen levels occurred in 0.5% of patients receiving ALTACE alone and in 3% of patients receiving ALTACE with a diuretic. None of these increases required discontinuation of treatment. Increases in these laboratory values are more likely to occur in patients with renal insufficiency or those pretreated with a diuretic and, based on experience with other ACE inhibitors, would be expected to be especially likely in patients with renal artery stenosis. (See PRECAUTIONS and WARNINGS.)

Since ramipril decreases aldosterone secretion, elevation of serum potassium can occur. Potassium supplements and potassium-sparing diuretics should be given with caution, and the patient's serum potassium should be monitored frequently. (See PRECAUTIONS and WARNINGS.)

Hemoglobin and Hematocrit: Decreases in hemoglobin or hematocrit (a low value and a decrease of 5 g/dl or 5% respectively) were rare, occurring in 0.4% of patients receiving ALTACE alone and in 1.5% of patients receiving ALTACE plus a diuretic. No US patients discontinued treatment because of decreases in hemoglobin or hematocrit.

Other (causal relationships unknown): Clinically important changes in standard laboratory tests were rarely associated with ALTACE administration. Elevations of liver enzymes, serum bilirubin, uric acid, and blood glucose have been reported, as have scattered incidents of leukopenia, eosinophilia, and proteinuria. In US trials, less than 0.2% of patients discontinued treatment for laboratory abnormalities: all of these were cases of proteinuria or abnormal liver-function tests.

OVERDOSAGE: Human overdoses of ramipril have not been reported, but the most common manifestation of human ramipril overdose is likely to be hypotension. Because the hypotensive effect of ramipril is achieved through vasodilation and effective hypovolemia, it is reasonable to treat ramipril overdose by infusion of normal saline solution.

ANNOUNCING A GREAT YEAR AHEAD FOR HERPES PATIENTS



1-YEAR INDICATION FOR DAILY THERAPY

Herpes patients can look forward to a great year ahead. Results of a recent clinical study show a lesion-free year for nearly half the patients treated with ZOVIRAX Capsules 400 mg b.i.d.*¹ For all ZOVIRAX Capsule recipients, recurrences during the study year were limited to a mean of 1.8, compared with a mean of 11.4 for placebo recipients.¹

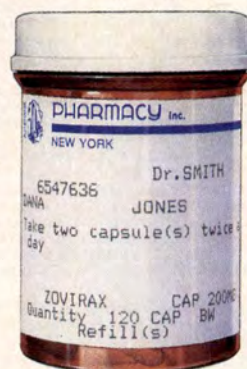
Daily use was also shown to be well tolerated. And this extended clinical study demonstrated no evidence of cumulative toxicity and no change in acyclovir sensitivity.^{1,2}

Prescribe daily ZOVIRAX Capsule therapy...and help keep your patients lesion-free longer.¹

*Alternate maintenance regimens range from 200 mg t.i.d. to 200 mg five times daily.

[†]In a controlled study of 3 years' duration, 45%, 52%, and 63% of patients remained free of recurrences in the first, second, and third years, respectively.³

Please see brief summary of prescribing information on adjacent page.



ZOVIRAX[®]
(acyclovir) capsules

KEEPS HERPES PATIENTS LESION-FREE LONGER[†]

ZOVIRAX® CAPSULES ZOVIRAX® SUSPENSION (ACYCLOVIR)

BRIEF SUMMARY

INDICATIONS AND USAGE: Zovirax Capsules and Suspension are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

Zovirax Capsules and Suspension are also indicated for the acute treatment of herpes zoster (shingles).

Genital Herpes Infections: The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus orally administered Zovirax is not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections—commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patients groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that orally administered Zovirax given daily for 4 months to 3 years prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients.

In a study of 283 patients who received 400 mg (two 200 mg capsules) twice daily for 3 years, 45%, 52% and 63% of patients remained free of recurrences in the first, second and third years, respectively. Serial analyses of the 3 month recurrence rates for the 283 patients showed that 71% to 87% were recurrence-free in each quarter, indicating that the effects are consistent over time.

The frequency and severity of episodes of untreated genital herpes may change over time. After 1 year of therapy, the frequency and severity of the patient's genital herpes infection should be re-evaluated to assess the need for continuation of acyclovir therapy. Re-evaluation will usually require a trial off acyclovir to assess the need for reinstitution of suppressive therapy. Some patients, such as those with very frequent or severe episodes before treatment, may warrant uninterrupted suppression for more than a year.

Chronic suppressive therapy is most appropriate when, in the judgment of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, orally administered Zovirax should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the relevance to humans of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given high parental doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients with annual re-evaluation.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

Herpes Zoster Infections: In a double-blind, placebo-controlled study of 187 normal patients with localized cutaneous zoster infection (93 randomized to Zovirax and 94 to placebo), Zovirax (800 mg 5 times daily for 10 days) shortened the times to lesion scabbing, healing and complete cessation of pain, and reduced the duration of viral shedding and the duration of new lesion formation.

In a similar double-blind, placebo-controlled study in 83 normal patients with herpes zoster (40 randomized to Zovirax and 43 to placebo), Zovirax (800 mg 5 times daily for 7 days) shortened the times to complete lesion scabbing, healing, and cessation of pain, reduced the duration of new lesion formation, and reduced the prevalence of localized zoster-associated neurologic symptoms (paresthesia, dyesthesia or hyperesthesia).

CONTRAINDICATIONS: Zovirax Capsules and Suspension are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulations.

WARNINGS: Zovirax Capsules and Suspension are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high parental doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS—Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex and varicella-zoster isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex or varicella-zoster virus to acyclovir and clinical response to therapy has yet to be established (see CLINICAL PHARMACOLOGY—Microbiology).

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced. The clinical effects of this combination have not been studied.

Carcinogenesis, Mutagenesis, Impairment of Fertility: The data presented below include references to peak steady state plasma acyclovir concentrations observed in humans treated with 800 mg given orally 6 times a day (dosing appropriate for treatment of herpes zoster) or 200 mg given orally 6 times a day (dosing appropriate for treatment of genital herpes). Plasma drug concentrations in animal studies are expressed as multiples of human exposure to acyclovir at the higher and lower dosing schedules (see Pharmacokinetics).

Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of up to 450 mg/kg administered by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. At 450 mg/kg/day, plasma concentrations were 3 to 6 times human levels in the mouse bioassay and 1 to 2 times human levels in the rat bioassay.

Acyclovir was tested in *in vitro* cell transformation assays. Positive results were observed at the highest concentration tested (31 to 63 times human levels) in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative (40 to 80 times human levels) in the other, possibly less sensitive, transformation assay.

In acute cytogenetic studies, there was an increase, though not statistically significant, in the incidence of chromosomal damage at maximum tolerated parental doses of acyclovir (100 mg/kg) in rats (62 to 125 times human levels) but not in Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters (380 to 760 times human levels). In addition, no activity was found after 5 days dosing in a dominant lethal study in mice (36 to 73 times human levels). In all 4 microbioassays, no evidence of mutagenicity was observed. Positive results were obtained in 2 of 7 genetic toxicity assays using mammalian cells *in vitro*. In human lymphocytes, a positive response for chromosomal damage was seen at concentrations 150 to 300 times the acyclovir plasma levels achieved in man. At one locus in mouse lymphoma cells, mutagenicity was observed at concentrations 250 to 500 times human plasma levels. Results in the other five mammalian cell loci follow. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive at concentrations at least 1850 times human levels; at 2 other loci in mouse lymphoma cells, no evidence of mutagenicity was observed at concentrations at least 1500 times human levels.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). In the mouse study plasma levels were 9 to 18 times human levels, while in the rat study they were 8 to 15 times human levels. At a higher dose in the rat (50 mg/kg/day, s.c.), there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day (16 to 31 times human levels). No effect upon implantation efficiency was observed when the same dose was administered intravenously (53 to 106 times human levels). In a rat peri- and postnatal study at 50 mg/kg/day s.c. (11 to 22 times human levels), there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₂ generation. Although not statistically significant, there was also a dose-related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size (plasma levels were not measured). However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits (53 to 106 times human levels), no drug-related reproductive effects were observed.

Intraperitoneal doses of 80 or 320 mg/kg/day acyclovir given to rats for 6 and 1 months, respectively, caused testicular atrophy. Plasma levels were not measured in the one month study and were 24 to 48 times human levels in the six month study. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. At 100 mg/kg/day plasma levels were 47 to 94 times human levels, while at 200 mg/kg/day they were 159 to 317 times human levels. No testicular abnormalities were seen in dogs given 50 mg/kg/day i.v. for one month (21 to 41 times human levels) and in dogs given 60 mg/kg/day orally for one year (6 to 12 times human levels).

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rabbit (50 mg/kg/day, s.c. and i.v.) or in standard tests in the rat (50 mg/kg/day, s.c.). These exposures resulted in plasma levels 9 and 18, 16 and 106, and 11 and 22 times, respectively, human levels. In a non-standard test in rats, there were fetal abnormalities, such as head and tail anomalies, and maternal toxicity. In this test, rats were given 3 s.c. doses of 100 mg/kg acyclovir on gestation day 10, resulting in plasma levels 63 and 125 times human levels. There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in standard animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: Acyclovir concentrations have been documented in breast milk in two women following oral administration of Zovirax and ranged from 0.6 to 4.1 times corresponding plasma levels. These concentrations would potentially expose the nursing infant to a dose of acyclovir up to 0.3 mg/kg/day. Caution should be exercised when Zovirax is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Herpes Simplex: Short-Term Administration: The most frequent adverse reactions reported during clinical trials of treatment of genital herpes with orally administered Zovirax were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%).

Nausea and/or vomiting occurred in 2 of 287 (0.7%) patients who received placebo.

Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments with orally administered Zovirax (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in a clinical trial for the prevention of recurrences with continuous administration of 400 mg (two 200 mg capsules) 2 times daily for 1 year in 586 Zovirax-treated patients were: nausea (4.8%), diarrhea (2.4%), headache (1.9%) and rash (1.7%). The 589 control patients receiving intermittent treatment of recurrences with Zovirax for 1 year reported diarrhea (2.7%), nausea (2.4%), headache (2.2%) and rash (1.5%). The most frequent adverse reactions reported during the second year by 390 patients who elected to continue daily administration of 400 mg (two 200 mg capsules) 2 times daily for 2 years were: headache (1.5%), rash (1.3%) and paresthesia (0.8%). Reactions reported by 329 patients during the third year include asthenia (1.2%), paresthesia (1.2%) and headache (0.9%).

Herpes Zoster: The most frequent adverse reactions reported during three clinical trials of treatment of herpes zoster (shingles) with 800 mg of oral Zovirax 5 times daily for 7 to 10 days in 323 patients were: malaise (11.5%), nausea (8.0%), headache (5.9%), vomiting (2.5%), diarrhea (1.5%) and constipation (0.9%). The 323 placebo recipients reported malaise (11.1%), nausea (11.5%), headache (11.1%), vomiting (2.5%), diarrhea (0.3%) and constipation (2.4%).

OVERDOSEAGE: Precipitation of acyclovir in renal tubules may occur when the solubility (2.5 mg/mL) in the intratubular fluid is exceeded. Renal lesions considered to be related to obstruction of renal tubules by precipitated drug crystals occurred in the following species: rats treated with i.v. and i.p. doses of 20 mg/kg/day for 21 and 31 days, respectively, and at s.c. doses of 100 mg/kg/day for 10 days; rabbits at s.c. and i.v. doses of 50 mg/kg/day for 13 days; and dogs at i.v. doses of 100 mg/kg/day for 31 days. A 6 hr hemodialysis results in a 60% decrease in plasma acyclovir concentration. Data concerning peritoneal dialysis are incomplete but indicate that this method may be significantly less efficient in removing acyclovir from the blood. In the event of acute renal failure and anuria, the patient may benefit from hemodialysis until renal function is restored (see DOSAGE AND ADMINISTRATION).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: 200 mg (one 200 mg capsule or one teaspoonful [5 mL] suspension) every 4 hours, 5 times daily for 10 days.

Chronic suppressive therapy for recurrent disease: 400 mg (two 200 mg capsules or two teaspoonfuls [10 mL] suspension) 2 times daily for up to 12 months, followed by re-evaluation. See INDICATIONS AND USAGE and PRECAUTIONS for considerations on continuation of suppressive therapy beyond 12 months. Alternative regimens have included doses ranging from 200 mg 3 times daily to 200 mg 5 times daily.

Intermittent Therapy: 200 mg (one 200 mg capsule or one teaspoonful [5 mL] suspension) every 4 hours, 5 times daily for 5 days. Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Acute Treatment of Herpes Zoster: 800 mg (four 200 mg capsules or four teaspoonfuls [20 mL] suspension) every 4 hours orally 5 times daily for 7 to 10 days.

Patients With Acute or Chronic Renal Impairment: Comprehensive pharmacokinetic studies have been completed following intravenous acyclovir infusions in patients with renal impairment. Based on these studies, dosage adjustments are recommended in the following chart for genital herpes and herpes zoster indications:

Normal Dosage Regimen (5x daily)	Creatinine Clearance (mL/min/1.73m ²)	Adjusted Dosage Regimen	
		Dose (mg)	Dosing Interval (hrs)
200 mg every 4 hours	> 10	200	every 4 hours, 5x daily
	0-10	200	every 12 hours
800 mg every 4 hours	> 25	800	every 4 hours, 5x daily
	10-25	800	every 8 hours
	0-10	800	every 12 hours

For patients who require hemodialysis, the dosing schedule should be adjusted so that a dose is administered after each dialysis.

References: 1. Mertz GJ, Jones CC, Mills J, et al. Long-term acyclovir suppression of frequently recurring genital herpes simplex virus infection: a multicenter double-blind trial. *JAMA*. 1988;260:201-206. 2. Mertz GJ, Eron L, Kaufman R, et al. Prolonged continuous versus intermittent oral acyclovir treatment in normal adults with frequently recurring genital herpes simplex virus infection. *Am J Med*. 1988;85(suppl 2A):14-19. 3. Data on file, Burroughs Wellcome Co., 1990.

IMPROVING LIVES THROUGH
ANTIVIRAL RESEARCH

 **Burroughs Wellcome Co.,**
Research Triangle Park,
North Carolina 27709

Copyright © 1991 Burroughs Wellcome Co.
All rights reserved. ZC-Y01615RV January 1991

Nicholas Edward Davies, MD, 65, was killed April 5, 1991, in the commuter airline crash in Brunswick, Ga, that also claimed the lives of former Senator John G. Tower and NASA shuttle astronaut Manley L. Carter, Jr.

Dr Davies was on his way to address a regional meeting of young physicians for the American College of Physicians. As president-elect, he was to have left Georgia promptly thereafter to be installed on April 13 as the president of the American College of Physicians at its annual meeting in New Orleans, La.



Dr Davies was highly visible in his profession, both locally and nationally, perhaps particularly because his considerable accomplishments were coupled with a gentle, unassuming personality. His overriding passion of the past few years was access to health care and its costs. He became increasingly concerned about a health care system where the best health care in the world was available to some of the people while others were virtually ignored. He decried the gap between the federal poverty level and Medicaid coverage and was determined that society must find a way to make health care available to the reported 37 million uninsured, approximately 900 000 of whom were in his home state of Georgia. How ironic, indeed, that the news of his death coincides with this week's *JAMA*, a special issue dedicated to caring for the uninsured and underinsured.

In search of solutions to the problems of the uninsured and underinsured, Dr Davies became the catalyst in the establishment of Georgia Health Decisions, modeled after Oregon Health Decisions. From the beginning, he insisted that the role of physicians would be to spearhead the initiation of this organization, to educate and inform the public of the details of the health care situation, and to interest and train lay people to carry out the goals of Georgia Health Decisions, which were oriented toward providing a package of basic health care benefits for everyone, initially in Georgia but ultimately throughout the United States. He chaired innumerable

meetings to launch this organization and, at the time of his death, had involved perhaps 100 people from business, industry, government, and sociological groups throughout the state.

In January 1990, *JAMA* published "Applying Brakes to the Runaway American Health Care System: A Proposed Agenda," of which Dr Davies was senior author. "Universal Access to Health Care in America: A Moral and Medical Imperative," an article he also coauthored in 1990, ran in *Annals of Internal Medicine* (1990;112:637-639). Altogether, Dr Davies was the author of more than 50 articles for scientific and lay publications. In addition, he served on the editorial board of the *Annals of Internal Medicine* from 1980 to 1984. The Medical Association of Atlanta selected him to be editor of *Atlanta Medicine* from 1971 to 1975. His wife—Garland Hunter Davies, a professor of English at Georgia State University in Atlanta—ably assisted him in these editorial pursuits.

Dr Davies graduated from the University of Virginia School of Medicine, Charlottesville, in 1952. Following an internship at Cincinnati (Ohio) General Hospital and a residency in internal medicine at Grady Memorial Hospital in Atlanta, he remained in Atlanta, where he practiced internal medicine and cardiology at Piedmont Hospital from 1957 to 1991. He was chairman of the Department of Medicine from 1983 to 1990 and a member of the Board of Trustees from 1982 to 1990. In 1990, he resigned to prepare for his duties as president of the American College of Physicians.

Dr Davies also held the position of chairman of the Piedmont Hospital Ethics Committee. His professional conduct and abiding interest in appropriate interpersonal relationships—particularly between patients and physicians—seemed to make this a natural position for him. Dr Davies was perceived by his associates as a warm, personable colleague who was constantly active in many intellectual, academic, and community affairs.

He became a fellow in the American College of Physicians in 1965, was governor for the Georgia section from 1976 to 1980, was a regent from 1984 to 1990, and was elected president-elect in 1990. He was a member of the Clinical Prac-

tice Subcommittee, where he worked with the Physician Payment Reform Commission and testified before Congress on matters of Medicare reimbursement, and was chairman of the Access to Health Care Committee, where he was involved in the formulation of the Position Paper of the American College of Physicians.

In addition to his many other accomplishments, Dr Davies served as president of the Georgia Heart Association, the Southeastern Clinical Club, and the Atlanta Medical History Society. He was a member of the American Heart Association, the Royal Society of Medicine, the American Clinical and Climatological Association, the Institute of Medicine, the American Society of Internal Medicine, and the Georgia Society of Internal Medicine. He served on the American Board of Internal Medicine from 1984 to 1990.

Dr Davies was the recipient of a commendation medal from the US Air Force. He served as medical adviser to the Visiting Nurse Association of Atlanta and was founder and chairman of the Friends of the Public Library. He served on the United Way Board of Trustees, the Georgia Council for International Visitors, and the Metropolitan Atlanta Community Foundation. Dr Davies was an avid and excellent tennis player and a frequent golfer with his wife.

In addition to his wife, Garland, of Atlanta, Dr Davies is survived by three children: Nicholas E., Jr, Elizabeth Sanders, and Sally Halsey.

Dr Davies' buoyant spirit, his continuous optimism, and his personal magnetism made it easy for him to involve others in his many activities that had a positive influence on physicians in Georgia and around the nation. He had a spirited sense of humor that mixed well with his kindness, compassion, patience, and cordiality. His untimely death as he approached the peak of his opportunities to spread his welcome influences nationwide is agonizing. We at Piedmont Hospital will continue to progress, but not nearly as well or as rapidly as we would have under his unique leadership.

—Louis H. Felder, MD

Let your patients know they can eat this...

While fish and chicken are certainly appropriate choices for fat-modified diets, so are lean cuts of today's beef.

Lean beef has the high-protein, iron-rich nutrient profile you value—and a fat profile that may surprise you. And when you include the good taste and versatility of beef in your heart-healthy diet recommendations, you're improving the chance that patients will comply better for long-term results.

Today, beef cuts are lower in fat

According to a national survey of supermarkets, there is on average 27% less trimmable fat on the beef sold in stores today than in the late '70s and early '80s.¹ Since that time, a follow-up survey in 1990 confirms a continued reduction in fat on retail beef.²



3-oz cooked serving
of beef tenderloin

Skinniest Six			
Per 3-oz, trimmed (after cooking) serving			
			
Top Round 153 cal. 4.2 g fat 1.4 g sat. fat	Sirloin 165 cal. 6.1 g fat 2.4 g sat. fat	Tenderloin 179 cal. 8.5 g fat 3.2 g sat. fat	Round Tip 157 cal. 5.9 g fat 2.1 g sat. fat

AHA and NCEP guidelines allow lean beef

The American Heart Association and the National Cholesterol Education Program have recognized the place for lean beef in a varied, balanced diet. Both of their dietary guidelines recommend up to 6 oz daily of lean beef and meats, poultry, or seafood.^{3,4}



...as
well
as
this.

Now when you recommend fat-modified diets, you can assure patients that fish and chicken aren't their only options. Tell them they can enjoy today's lean beef, a delicious and heart-healthy choice.

References:

1. Savell JW, et al. National Beef Market Basket Survey. *J Anim Sci*. In press.
2. Morgan JB, et al. *National Beef Tenderness Survey: Meat Research Brief*. College Station, TX: Meats and Muscle Biology Section, Department of Animal Science, Texas A & M University; 1990.
3. American Heart Association. *Dietary Guidelines for Healthy American Adults*. (Document No. 71-1003). *Circulation*. 1988; 77 (3).
4. National Cholesterol Education Program. *Report of the Expert Panel on the Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults*. Washington, DC: National Institutes of Health; January 1988. NIH publication 88-2925.

Here's how you can help patients enjoy beef that's compatible with a heart-healthy diet:

- Encourage your patients to purchase lean cuts,
- Keep portions moderate (about 3 oz, cooked),
- Remove visible fat before cooking, and
- Prepare without using any additional fat.

Recommend
Today's Lean
Beef



A Heart-Healthy
Choice

PUBLIC GRANT ANNOUNCEMENT

European Medical Partnerships Sought

The U.S. Agency for International Development (A.I.D.), the federal government's agency for management of U.S. foreign assistance, is soliciting proposals for partnerships between medical facilities in the U.S. and those in Central and East Europe. Subject to the availability of funds, A.I.D. expects to award up to ten grants in support of such partnerships during 1991. It is expected that grants will range between \$1.5 and \$2.5 million and two-to three years.

A.I.D. welcomes applications from community and municipal hospitals, university teaching hospitals or tertiary health care facilities and from for-profit or non-profit institutions. Eligible partners may be individual medical facilities, a consortia of medical facilities, or a third party acting on behalf of a group of such facilities. Preference will be given to proposals that demonstrate the maximum allocation of A.I.D. resources to program activities. Participating U.S. medical facilities must be accredited by the Joint Commission on Accreditation of Healthcare Organizations.

Priority areas of assistance are cardiovascular and cerebrovascular diseases, cancers, pediatric trauma, emergency medical systems, and medical effects of environmental pollution. Partnership activities might include training, utilization and outcome research, diagnostic and treatment improvements, and outpatient prevention programs. The target countries are Poland, Hungary, Czechoslovakia, Yugoslavia, Bulgaria and Romania. Partnerships are to focus on a single area of medical assistance in a single country.

A.I.D. anticipates making Request for Applications Number OS/EE/91-009 available in early April. To obtain a copy, please send a written request with two self-addressed mailing labels to: The Agency for International Development, Office of Procurement, Overseas Division, Rm. 1583, SA-14, Washington, D.C. 20523-1420, Attn: Mr. James Loy (Telephone (703) 875-1041). Please indicate in your request the Central or East European country of priority interest to your institution. A.I.D. will share this information with other requestors unless directed not to do so.

Solving one puzzle of patient communications...

Medicolegal Forms with Legal Analysis

Medicolegal Forms with Legal Analysis is the ideal resource for assembling the legal pieces of your physician-patient relations. This **newly-revised** single volume contains more than 80 sample forms developed by the AMA's Office of the General Counsel, along with discussions explaining the use and structure of the forms and case law citations.

Only *Medicolegal Forms with Legal Analysis* assembles this valuable information so conveniently for adaptation to individual practice situations.

Order your copy today; call toll-free **1-800-621-8335**

Order #OP630290 AMA Member \$25 Non-member \$32

Visa and MasterCard only.

Appropriate state sales tax will be added as applicable. \$3.50 will also be added for shipping and handling for orders under \$35.00



American
Medical
Association

HP011

LANOXIN® (DIGOXIN) TABLETS

125 µg (0.125 mg) Scored I.D. Imprint Y3B (yellow)
250 µg (0.25 mg) Scored I.D. Imprint X3A (white)
500 µg (0.5 mg) Scored I.D. Imprint T9A (green)

Before using Lanoxin Tablets, the physician should be thoroughly familiar with the basic pharmacology of this drug as well as its drug interactions, indications, and usage.

DESCRIPTION: Lanoxin is digoxin, one of the cardiac (or digitalis) glycosides, a closely related group of drugs having in common specific effects on the myocardium.

INDICATIONS AND USAGE:

Heart Failure: The increased cardiac output resulting from the inotropic action of digoxin ameliorates the disturbances characteristic of heart failure (venous congestion, edema, dyspnea, orthopnea and cardiac asthma). Digoxin is more effective in "low output" (pump) failure than in "high output" heart failure secondary to arteriovenous fistula, anemia, infection or hyperthyroidism.

Digoxin is usually continued after failure is controlled, unless some known precipitating factor is corrected. Studies have shown, however, that even though hemodynamic effects can be demonstrated in almost all patients, corresponding improvement in the signs and symptoms of heart failure is not necessarily apparent. Therefore, in patients in whom digoxin may be difficult to regulate, or in whom the risk of toxicity may be great (e.g., patients with unstable renal function or whose potassium levels tend to fluctuate) a cautious withdrawal of digoxin may be considered. If digoxin is discontinued, the patient should be regularly monitored for clinical evidence of recurrent heart failure.

CONTRAINDICATIONS:

Digitalis glycosides are contraindicated in ventricular fibrillation. In a given patient, an untoward effect requiring permanent discontinuation of other digitalis preparations usually constitutes a contraindication to digoxin. Hypersensitivity to digoxin itself is a contraindication to its use. Allergy to digoxin, though rare, does occur. It may not extend to all such preparations, and another digitalis glycoside may be tried with caution.

WARNINGS: Digitalis alone or with other drugs has been used in the treatment of obesity. This use of digoxin or other digitalis glycosides is unwarranted. Moreover, since they may cause potentially fatal arrhythmias or other adverse effects, the use of these drugs solely for the treatment of obesity is dangerous.

Anorexia, nausea, vomiting and arrhythmias may accompany heart failure or may be indications of digitalis intoxication. Clinical evaluation of the cause of these symptoms should be attempted before further digitalis administration. In such circumstances determination of the serum digoxin concentration may be an aid in deciding whether or not digitalis toxicity is likely to be present. If the possibility of digitalis intoxication cannot be excluded, cardiac glycosides should be temporarily withheld, if permitted by the clinical situation.

Patients with renal insufficiency require smaller than usual maintenance doses of digoxin (see DOSAGE AND ADMINISTRATION section).

Heart failure accompanying acute glomerulonephritis requires extreme care in digitalization. Relatively low loading and maintenance doses and concomitant use of antihypertensive drugs may be necessary and careful monitoring is essential. Digoxin should be discontinued as soon as possible.

Patients with severe cardiac, such as cardiacitis associated with rheumatic fever or viral myocarditis, are especially sensitive to digoxin-induced disturbances of rhythm.

Newborn infants display considerable variability in their tolerance to digoxin. Premature and immature infants are particularly sensitive, and dosage must not only be reduced but must be individualized according to their degree of maturity. Note: Digitalis glycosides are an important cause of accidental poisoning in children.

PRECAUTIONS:

General: Digoxin toxicity develops more frequently and lasts longer in patients with renal impairment because of the decreased excretion of digoxin. Therefore, it should be anticipated that dosage requirements will be decreased in patients with moderate to severe renal disease (see DOSAGE AND ADMINISTRATION section). Because of the prolonged half-life, a longer period of time is required to achieve an initial or new steady-state concentration in patients with renal impairment than in patients with normal renal function.

In patients with hypokalemia, toxicity may occur despite serum digoxin concentrations within the "normal range," because potassium depletion sensitizes the myocardium to digoxin. Therefore, it is desirable to maintain normal serum potassium levels in patients being treated with digoxin. Hypokalemia may result from diuretic, amphotericin B or cardiac steroid therapy, and from dialysis or mechanical suction of gastrointestinal secretions. It may also accompany malnutrition, diarrhea, prolonged vomiting, old age and long-standing heart failure. In general, rapid changes in serum potassium or other electrolytes should be avoided, and intravenous treatment with potassium should be reserved for special circumstances as described below (see TREATMENT OF ARRHYTHMIAS PRODUCED BY OVERDOSSAGE section). Calcium, particularly when administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Hypercalcemia from any cause predisposes the patient to digitalis toxicity. On the other hand, hypocalcemia can nullify the effects of digoxin in man; thus, digoxin may be ineffective until serum calcium is restored to normal. These interactions are related to the fact that calcium affects contractility and excitability of the heart in a manner similar to digoxin.

Hypomagnesemia may predispose to digitalis toxicity. If low magnesium levels are detected in a patient on digoxin, replacement therapy should be instituted.

Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. This rise appears to be proportional to the dose. The effect is mediated by a reduction in the digoxin clearance and, in the case of quinidine, decreased volume of distribution as well.

Certain antibiotics may increase digoxin absorption in patients who convert digoxin to inactive metabolites in the gut (see Pharmacokinetics portion of the CLINICAL PHARMACOLOGY section). Recent studies have shown that specific colonic bacteria in the lower gastrointestinal tract convert digoxin to cardioinactive reduction products, thereby reducing its bioavailability. Although inactivation of these bacteria by antibiotics is rapid, the serum digoxin concentration will rise at a rate consistent with the elimination half-life of digoxin. The magnitude of rise in serum digoxin concentration relates to the extent of bacterial inactivation, and may be as much as two-fold in some cases.

Patients with acute myocardial infarction or severe pulmonary disease may be unusually sensitive to digoxin-induced disturbances of rhythm.

Atrial arrhythmias associated with hypermetabolic states (e.g., hyperthyroidism) are particularly resistant to digoxin treatment. Large doses of digoxin are not recommended as the only treatment of these arrhythmias and care must be taken to avoid toxicity if large doses of digoxin are required.

Digoxin response in patients with compensated thyroid disease are normal. In hyperthyroidism, the digoxin requirements are reduced. Reduction of digoxin dosage may be desirable prior to electrical cardioversion to avoid induction of ventricular arrhythmias, but the physician must consider the consequences of rapid increase in ventricular response to atrial fibrillation if digoxin is withheld 1 to 2 days prior to cardioversion. If there is a suspicion that digitalis toxicity exists, elective cardioversion should be delayed. If it is not prudent to delay cardioversion, the energy level selected should be minimal at first and carefully increased in an attempt to avoid precipitating ventricular arrhythmias.

Incomplete AV block, especially in patients with Stokes-Adams attacks, may progress to advanced or complete heart block if digoxin is given.

In some patients with sinus node disease (i.e., Sick Sinus Syndrome), digoxin may worsen sinus bradycardia or sinoatrial block.

In patients with Wolff-Parkinson-White Syndrome and atrial fibrillation, digoxin can enhance transmission of impulses through the accessory pathway. This effect may result in extremely rapid ventricular rates and even ventricular fibrillation. Digoxin may worsen the outflow obstruction in patients with idiopathic hypertrophic subaortic stenosis (IHSS). Unless cardiac failure is severe, it is doubtful whether digoxin should be employed.

Patients with chronic obstructive pericarditis may fail to respond to digoxin. In addition, slowing of the heart rate by digoxin in some patients may further decrease cardiac output.

Patients with heart failure from amyloid heart disease or constrictive cardiomyopathies respond poorly to treatment with digoxin.

Digoxin is not indicated for the treatment of sinus tachycardia unless it is associated with heart failure. Digoxin may produce false positive ST-T changes in the electrocardiogram during exercise testing. Intramuscular injection of digoxin is extremely painful and offers no advantages unless other routes of administration are contraindicated.

Laboratory Tests: Patients receiving digoxin should have their serum electrolytes and renal function (BUN and/or serum creatinine) assessed periodically. The frequency of assessments will depend on the clinical setting. For discussion of serum digoxin concentrations, see DOSAGE AND ADMINISTRATION section in the complete prescribing information.

Drug Interactions: Potassium-depleting *cardiotonics* and *diuretics* may be major contributing factors to digitalis toxicity. Calcium, particularly if administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. Certain antibiotics increase digoxin absorption in patients who inactivate digoxin by bacterial metabolism in the lower intestine, so that digitalis intoxication may result. Propantheline and diphenoxylate, by decreasing gut motility, may increase digoxin absorption. Antacids, kaolin-pectin, sulfasalazine, neomycin, cholestyramine and certain anticancer drugs may interfere with intestinal digoxin absorption, resulting in unexpectedly low serum concentrations. There have been inconsistent reports regarding the effects of other drugs on the serum digoxin concentration. Thyroid administration to a digitalized, hypothyroid patient may increase the dose requirement of digoxin. Concomitant use of digoxin and *sympathomimetics* increases the risk of cardiac arrhythmias because both enhance ectopic pacemaker activity. *Succinylcholine* may cause a sudden exertion of potassium from muscle cells, and may thereby cause arrhythmias in digitalized patients. Although β -adrenergic blockers or calcium channel blockers and digoxin may be useful in combination to control atrial fibrillation, their additive effects on AV node conduction can result in complete heart block.

Due to the considerable variability of these interactions, digoxin dosage should be carefully individualized when patients receive coadministered medications. Furthermore, caution should be exercised when combining digoxin with any drug that may cause a significant deterioration in renal function, since this may impair the excretion of digoxin. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** There have been no long-term studies performed in animals to evaluate carcinogenic potential.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Animal reproduction studies have not been conducted with digoxin. It is also not known whether digoxin can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Digoxin should be given to a pregnant woman only if clearly needed.

Nursing Mothers: Studies have shown that digoxin concentrations in the mother's serum and milk are similar. However, the estimated daily dose to a nursing infant will be far below the usual infant maintenance dose. Therefore, this

amount should have no pharmacologic effect upon the infant. Nevertheless, caution should be exercised when digoxin is administered to a nursing woman.

ADVERSE REACTIONS: The frequency and severity of adverse reactions to digoxin depend on the dose and route of administration, as well as on the patient's underlying disease or concomitant therapies (see PRECAUTIONS section and Serum Digoxin Concentrations subsection of DOSAGE AND ADMINISTRATION). The overall incidence of adverse reactions has been reported as 5 to 20%, with 15 to 20% of them being considered serious (one to four percent of patients receiving digoxin). Evidence suggests that the incidence of toxicity has decreased since the introduction of the serum digoxin assay and improved standardization of digoxin tablets. Cardiac toxicity accounts for about one-half gastrointestinal disturbances for about one-fourth, and CNS and other toxicity for about one-fourth of these adverse reactions.

Adults:

Cardiac:—Unifocal or multifocal premature contractions, especially in bigeminal or trigeminal patterns, are the most common arrhythmias associated with digoxin toxicity in adults with heart disease.

Ventricular tachycardia may result from digitalis toxicity. Atrioventricular (AV) dissociation, accelerated junctional (nodal) rhythm and atrial tachycardia with block are also common arrhythmias caused by digoxin overdosage.

Excessive slowing of the pulse is a clinical sign of digoxin overdosage. AV block (Wenckebach) of increasing degree may proceed to complete heart block.

Note: The electrocardiogram is fundamental in determining the presence and nature of these cardiac disturbances.

Digoxin may also induce other changes in the ECG (e.g., PR prolongation, ST depression), which represent digoxin effect and may or may not be associated with digitalis toxicity.

Gastrointestinal:—Anorexia, nausea, vomiting and less commonly diarrhea are common early symptoms of overdosage. However, uncontrolled heart failure may also produce such symptoms. Digitalis toxicity very rarely may cause abdominal pain and hemorrhagic necrosis of the intestines.

CNS:—Visual disturbances (blurred or yellow vision), headache, weakness, dizziness, apathy and psychosis can occur. Other—Gynecomastia is occasionally observed. Maculopapular rash or other skin reactions are rarely observed.

Infants and Children: Toxicity differs from the adult in a number of respects. Anorexia, nausea, vomiting, diarrhea and CNS disturbances may be present but are rare as initial symptoms in infants. Cardiac arrhythmias are more reliable signs of toxicity. Digoxin in children may produce any arrhythmia. The most commonly encountered are conduction disturbances or supraventricular tachyarrhythmias, such as atrial tachycardia with or without block, and junctional (nodal) tachycardia. Ventricular arrhythmias are less common. Sinus bradycardia may also be a sign of impending digoxin intoxication, especially in infants, even in the absence of first degree heart block. Any arrhythmia or alteration in cardiac conduction that develops in a child taking digoxin should initially be assumed to be a consequence of digoxin intoxication.

OVERDOSSAGE:

Treatment of Arrhythmias Produced by Overdosage:

Adults: Digoxin should be discontinued until all signs of toxicity are gone. Discontinuation may be all that is necessary if toxic manifestations are not severe and appear only near the expected time for maximum effect of the drug.

Correction of factors that may contribute to toxicity such as electrolyte disturbances, hypoxia, acid-base disturbances and removal of aggravating agents such as catecholamines, should also be considered. Potassium salts may be indicated, particularly if hypokalemia is present. Potassium administration may be dangerous in the setting of massive digitalis overdosage (see Massive Digitalis Overdosage subsection below). Potassium chloride in divided oral doses totaling 3 to 6 grams of the salt (40 to 80 mEq K+) for adults may be given provided renal function is adequate (see below for potassium recommendations in Infants and Children).

When correction of the arrhythmia is urgent and the serum potassium concentration is low or normal, potassium should be administered intravenously in 5% dextrose injection. For adults, a total of 40 to 80 mEq (diluted to a concentration of 40 mEq per 500 mL) may be given at a rate not exceeding 20 mEq per hour, or slower if limited by pain due to local irritation. Additional amounts may be given if the arrhythmia is uncontrolled and potassium well-tolerated. ECG monitoring should be performed to watch for any evidence of potassium toxicity (e.g., peaking of T waves) and to observe the effect on the arrhythmia. The infusion may be stopped when the desired effect is achieved.

Note: Potassium should not be used and may be dangerous in heart block due to digoxin, unless primarily related to supraventricular tachycardia.

Other agents that have been used for the treatment of digoxin intoxication include lidocaine, procainamide, propranolol and phenytoin, although use of the latter must be considered experimental. In advanced heart block, atropine and/or temporary ventricular pacing may be beneficial. Digibind™ (Digoxin Immune Fab [Ovine]), can be used to reverse potentially life-threatening digoxin (or digitoxin) intoxication. Improvement in signs and symptoms of digitalis toxicity usually begins within 1/2 hour of Digibind administration. Each 40 mg vial of Digibind will neutralize 0.6 mg of digoxin (which is a usual body store of an adequately digitalized 70 kg patient).

Infants and Children: See Adult section for general recommendations for the treatment of arrhythmias produced by overdosage and for cautions regarding the use of potassium.

If a potassium preparation is used to treat toxicity, it may be given orally in divided doses totaling 1 to 1.5 mEq K+ per kilogram (kg) body weight (1 gram of potassium chloride contains 13.4 mEq K+).

When correction of the arrhythmia with potassium is urgent, approximately 0.5 mEq/kg of potassium per hour may be given intravenously, with careful ECG monitoring. The intravenous solution of potassium should be diluted enough to avoid local irritation; however, especially in infants, care must be taken to avoid intravenous fluid overload.

DOSAGE AND ADMINISTRATION: Recommended dosages are average values that may require considerable modification because of individual sensitivity or associated conditions. Diminished renal function is the most important factor requiring modification of recommended doses.

In deciding the dose of digoxin, several factors must be considered:

1. The disease being treated. Atrial arrhythmias may require larger doses than heart failure.
2. The body weight of the patient. Doses should be calculated based upon lean or ideal body weight.
3. The patient's renal function, preferably evaluated on the basis of creatinine clearance.
4. Age is an important factor in infants and children.
5. Concomitant disease states, drugs or other factors likely to alter the expected clinical response to digoxin (see PRECAUTIONS and Drug Interactions sections).

Consult complete product information before prescribing.

References: 1. The Captopril-Digoxin Multicenter Research Group. Comparative effects of therapy with captopril and digoxin in patients with mild to moderate heart failure. *JAMA*. 1988;259:539-544.
2. DiBianco R, Shabetai R, Kostuk W, Moran J, Schlant RC, Wright R. A comparison of oral milrinone, digoxin, and their combination in the treatment of patients with chronic heart failure. *N Engl J Med*. 1989;320:677-683.
3. Guyatt GH, Sullivan MJJ, Fallen EL, et al. A controlled trial of digoxin in congestive heart failure. *Am J Cardiol*. 1988;61:371-375.
4. Gheorghiade M, Hall V, Lakier JB, Goldstein S. Comparative hemodynamic and neurohormonal effects of intravenous captopril and digoxin and their combinations in patients with severe heart failure. *J Am Coll Cardiol*. 1989;13:134-142.
5. Arnold SB, Byrd RC, Meister W, et al. Long-term digitalis therapy improves left ventricular function in heart failure. *N Engl J Med*. 1980;303:1443-1448.
6. Alicandri C, Fanello R, Boni E, Zaninelli A, Muesen G. Comparison of captopril and digoxin in mild to moderate heart failure. *Postgrad Med J*. 1986;62(suppl 1):170-175.

IN THE EARLY TREATMENT OF CHF

LANOXIN®

(digoxin) Tablets

Unique inotropic support for the failing heart.



Burroughs Wellcome Co.
Wellcome Research Triangle Park, NC 27709



For patients with lactose intolerance

DAIRY FOODS COME WITH HIDDEN COSTS



HELP PREVENT THEM WITH LACTAID®

Take the unpleasant consequences out of milk and other dairy products with Lactaid® therapy. In controlled studies with children and adults, Lactaid treatment effectively prevented the gastrointestinal symptoms of lactose intolerance.^{1,2}

References:

1. Medow MS, Thek KD, Newman LJ, Berezin S, Glassman MS, Schwarz SM. *AJDC*. 1990;144:1261-1264. 2. Rosado JL, Solomons NW, Lisker R, et al. *Gastroenterology*. 1984;87:1072-1082.

Marketed by:

McNeil Consumer Products Company
Division of McNeil-PPC, Inc.
Fort Washington, PA 19034 USA

McNEIL



©McN, 1991

Lactaid®

Lactase Supplementation Therapy

**For dairy foods
without discomfort**

A breakthrough in convenience for the treatment of vaginal candidiasis

Now, recommend
the first nonprescription
cure* for your patients...
wherever they may be



*Gyne-Lotrimin cures most vaginal candidiasis.
© 1991, Schering-Plough HealthCare Products, Inc.
Memphis, TN



Gyne-Lotrimin®

CLOTRIMAZOLE vaginal inserts or cream

Full prescription strength
with nonprescription convenience

Proven efficacy comparable to prescription medications. Now, when you diagnose vaginal candidiasis, you can offer patients the same proven clotrimazole efficacy, fast symptom relief, and excellent safety profile you've always depended on...for the first time, without a prescription.

New convenience when you see her in your office... or when you don't. When your patients recognize the classic symptoms of a recurrent infection, your recommendation will ensure that they get the fast, safe, and effective treatment they need. It's never been this easy—or this cost-effective—to provide effective therapy for recurrent vaginal candidiasis.

Recommend nonprescription Gyne-Lotrimin.

Available in 7-day vaginal insert 100 mg or 7-day vaginal cream 1%. Instruct patients to insert one tablet or one applicator full of cream each night for 7 days.



GLZ-102

2/91

Printed in USA

**Recommend Gyne-Lotrimin
when you see her...when you don't.**

 Schering-Plough

Ethics, Cost

Medicine and Money: A Study of the Role of Beneficence in Health Care Cost Containment, by Frank H. Marsh and Mark Yarborough, 171 pp, \$39.95, ISBN 0-313-26357-4, St Louis, Mo, Warren H Green Inc, 1990.

No subject in medical ethics is more important today than the moral problems underlying the pressures of cost containment. Frank H. Marsh and Mark Yarborough have, in a modestly sized volume, attacked ethics and health care at its most vulnerable underbelly. Their thesis is that "the principle of beneficence [doing good] as structured within the physician-patient relationship can become a formidable resource to be used in the struggle against inflationary health care expenditures" (p 5). In fact, they claim that the principle, properly applied, can produce substantial savings, bringing escalating health care expenditures under control (p 86).

Their first point to expenditures for futile care and care that actually does patients more harm than good. Simply doing what will benefit the patient would actually save money as a fringe benefit. If that were sufficient savings, Marsh and Yarborough would have solved the most difficult medical ethical problem of the generation.

But there is a catch. There are good reasons to believe that, in principle, it cannot be enough simply to eliminate useless and harmful care. There will always be care that is very marginally beneficial and yet very expensive. It seems not all such care should be provided, yet Marsh and Yarborough never tell us how it could be eliminated in the name of the principle of beneficence. The authors use interchangeably the terms *futile* or *ineffective* care and *marginally effective* care so that they can claim that because beneficence supports removal of ineffective care, it supports removal of marginally effective care as well (p 131). They simply fail to see that a clinician really devoted to doing what

is best for the patient would have to eliminate the former but not the latter.

Part of the problem with the book is that the authors never really provide a clear conceptualization of their key category, beneficence. Do they simply mean literally "doing good" no matter for whom the good accrues (the standard use of the term) or do they mean, in more traditional Hippocratic fashion, doing good for the patient? They seem to mean the latter; at several points they say so (pp 32, 74, 98, 129), yet there must be many cases in which it simply does not work out that doing the best for the patient also happens to do the most good for society. They simply do not take seriously the possibility that these two goods can conflict. It seems very unlikely that doing what is best for the patient will really solve the cost-containment dilemma.

Furthermore, they do not take seriously the possibility that beneficence can really conflict with other moral duties, including respect for autonomy and the promotion of justice. At places (pp 26, 67) they consider autonomy a value served in the name of beneficence, while at other places they acknowledge that patients may not know their own interests (p 76). They seem to affirm contradictions such as that "the physician can seek the good of patients only by consulting them" (p 74) and that "some patients cannot, for a variety of reasons, define their own best interests."

Their treatment of the principle of justice is unfortunate. They seem to think that defenders of egalitarian justice would require that if a service is provided to some, it must be provided to all. The literature is full of sophisticated justice-based arguments showing that, for example, care could be allocated in the name of justice among people with the same disease on the basis of age, degree of illness, or many other measures of who is worst off. Sometimes the authors themselves cannot tell if they are grounding their claim in beneficence or justice, as in their confusing claim that "There is no good or just reason to pro-

vide people with ineffective or marginally effective medical treatment" (p 131). They cannot see that even if there is no good reason to provide ineffective care, doing what is best for the patient still requires providing effective care, even if it is marginal. Only a shift to the principle of justice provides a ground for eliminating the latter kind of care. Only by abandoning patient-centered beneficence and shifting to justice will such care be limited. They come close to saying this when they say, "Justice demands that people be granted access to effective care and nothing else." It seems it would have been more reasonable to say that while beneficence demands (all) effective care, justice would permit eliminating some marginally effective care.

We are left with contradictions that suggest that beneficence alone—at least beneficence as described by Marsh and Yarborough—cannot possibly commit the physician to doing what is best for the patient and solve the cost-containment problem. According to the authors, "The approach we are endorsing places the responsibility to contain costs squarely on the shoulders of physicians" (p 135), yet "these constraints must originate, if they are to be acceptable, outside of the medical context. They must be supramedical and imposed on medicine" (p 152). Perhaps the time has come to look once again at some of the principles that Marsh and Yarborough reject, such as the principle of justice. In doing so we could still insist that the clinician be beneficent, but then set societal limits grounded in justice to solve the cost-containment problem.

Robert M. Veatch, PhD
Georgetown University
Washington, DC

Deinstitutionalization

Out of Bedlam: The Truth About Deinstitutionalization, by Ann Braden Johnson, 306 pp, \$22.95, ISBN 0-465-05427-7, New York, NY, Basic Books Inc, 1990.

Madness in the Streets: How Psychiatry and the Law Abandoned the Mentally Ill, by Rael Jean Isaac and Virginia C. Armat, 436 pp, \$24.95, ISBN 0-02-915380-8, New York, NY, Free Press, 1990.

Edited by Harriet S. Meyer, MD, Contributing Editor; adviser for software, Robert Hogan, MD, San Diego.

Out of Bedlam takes a very cynical, angry look at the mental health system. Part I, "How Deinstitutionalization Supposedly Took Place," begins by describing how asylums were originally created to protect the seriously mentally ill from the stresses of society. This treatment concept dwindled as case-loads began to overwhelm the system, causing the state hospitals to have to move from treatment to custody. Next came the mental hygiene movement, which was designed to have smaller hospitals and community-based aftercare; unfortunately, neither materialized as the prevention of mental illness became a priority. As the deplorable conditions of state hospitals became known and state governments realized they could not afford the care of the seriously mentally ill, pressure for the federal government to become involved in mental health care mounted. The author does a good job of describing the philosophic and political conflicts between the goals of prevention vs care, which caused the recommendations of the Joint Commission on Mental Illness and Health to be ignored, despite the fact that its report clearly spelled out the need for community-based treatment working along with smaller hospitals.

In the chapter "May the Sales Force Be With You: Psychotropic Medication, the New Magic Bullet," the author assails how psychotropic medication was marketed and how it never lived up to its claims. She charges that while medication made patients more manageable, it often became the "sole treatment of choice in far too many cases."

In looking at the forces that have shaped the practice of psychiatry, the author briefly notes the antipsychiatry movement so eloquently described in *Madness in the Streets* by R. J. Isaac and V. C. Armat, but she really doesn't expound on how this movement caused a lot of the problems she identifies with the current mental health system. She does do a creditable job of indicating how Medicaid, which gave the disabled mentally ill benefits, made it possible for state hospitals to begin moving mentally ill patients into nursing homes. And Medicaid is blamed for the failure of states to develop genuine, community-based alternatives to the institutional care of the seriously mentally ill because of the reimbursement practices that exclude day treatment, casework, vocational services, etc. Finally, it is pointed out that nobody built community-based housing (an essential component needed to make deinstitutionalization work) because no organization had the means to pay for it.

In part II, "1970 and Beyond—the Aftermath of Deinstitutionalization," the author describes where the seriously mentally ill really went, ie, into nursing homes, board and care homes, adult care homes, and the like. The lack of regulation of these facilities made it possible for their clients to become a profitable commodity. Unfortunately, because these residences weren't formally connected to the mental health system, the coordination of care often broke down, which contributed to the problem of the homeless mentally ill. There is a fair amount of unconstructive criticism about how the current mental health system is large, chaotic, uncoordinated, and incoherent and utterly fails in its mission, the ongoing care and treatment of the seriously mentally ill. The author finally succinctly states what they need: a place to live, aggressive outreach, the ability to be rehospitalized when needed, reeducation in the myriad skills of interpersonal life, work to do, cigarettes and coffee, and real treatment free of condescension from therapists they feel they can trust for as long as they are needed. She reports on programs that work and underscores their common thread, a focus on the transmission of social skills to promote patients' adaptations to society.

"How the Mental Health System Works" is covered in part III, and mental health is called "big business." Mental health funding is said to be driven by politics, expediency, and fads. Along with the lure of quick fixes, there is fragmentation of the system due to the absence of any organization to oversee governmental, voluntary, and private practice with an agenda of unifying and interrelating patient services for better care. The service provision system is accused of being full of holes.

Exposing the fact that practitioners and policymakers-administrators don't communicate, the author identifies a major factor in the fragmentation process. She is very critical of monitoring programs that result in policy on one level and practice on another level with communication between the two levels forced, artificial, and self-serving.

The conclusion is that serious mental illness is not the fault of the mental health system, deinstitutionalization, or the patient. Deinstitutionalization has made it clear that many seriously and chronically mentally ill people can live outside of a total institution and can do well under certain circumstances—the problem has been putting those circumstances in place in the community. The strength of the book is that it has a lot of relevant information necessary to understand what happened with dein-

stitutionalization and the problems that prevent the mental health system from working optimally. The weakness of the book is that it is written with so much cynicism that the good points it raises may be overlooked because of its tone.

Madness in the Streets is a very important book because it clearly chronicles the process that significantly contributed to the seriously mentally ill having to live on the streets. It provides the accurate direction society needs to correct a serious problem.

The authors show how the care of the seriously mentally ill has evolved from the shame of poor public mental hospital care to the shame of no care as a result of their being denied hospitalization without adequate treatment and support in the community. The origins of this transition are traced back to the counterculture and antipsychiatry movements, and a fine job is done of highlighting the major events and people who gave these movements momentum.

It is revealed how, despite the Joint Commission of Mental Illness and Health's recommendations, community mental health's goal was to prevent serious mental illness rather than care for the mentally ill. Little attention was paid to where deinstitutionalized patients would live or go for inpatient care. The book charges that early community mental health center (CMHC) regulations ignored procedures to aid in treatment, eg, there was no mandate for CMHCs to interface with state hospitals. Credit is given to CMHCs for helping to develop partial hospitalization, psychiatric emergency care, and psychiatric beds in general hospitals, but they are castigated for making their major focus social activism and counseling and crisis intervention for problems of living.

In the section provocatively entitled "The Law Becomes Deranged," the authors trace the development of the "mental health bar," which consisted of a group of young lawyers who sought to eliminate involuntary commitment as their contribution to civil rights. Law journals began to be filled with unscientific antipsychiatry propaganda, and state hospitals came under attack for not providing treatment. Faced with laws demanding staffing patterns that state budgets couldn't accommodate, laws preventing patient labor that had reduced state hospital maintenance costs, and a new law entitling the mentally ill to disability benefits (making it possible for them to be supported outside of the hospital on the federal rather

than the state budget), the states began to empty and close their hospitals. The next step in the process was the establishment of the right to refuse treatment. Legal roadblocks were established that caused treatment delays, a waste of money on administrative procedures, and discharge of uncooperative patients. The dangerousness standard of commitment rather than the need for treatment standard made it easier for patients to enter the criminal justice system than the mental health system.

An excellent job is done of illustrating the scientific proof of the efficacy and safety of psychosurgery, electroconvulsive therapy, and psychotropic medication. Yet the proponents of antipsychiatry have been able to sway public opinion, public policy, and the law against these effective treatments of psychiatry by using the popular media. Rich stories of real people exemplify the price of not having these treatments readily available to the seriously mentally ill and the good these treatments have done when given appropriately. Model programs that provide work, housing, treatment, and social interaction are portrayed, but the authors accurately point out that without compliance with drug therapy such programs don't work.

The assertion is made that society has approved of the right to be crazy, and the burden of care has fallen on the family, with little support forthcoming from the hamstrung psychiatric profession. Thus, in the final chapter, the authors are specific in stating that community services are not enough, and a public policy prescription is given to correct the damage the "myth of mental illness" has done over the last 30 years. The authors conclude by observing that the National Alliance for the Mentally Ill will be most helpful if it breaks its ties with those in the antipsychiatry movement who seek to obstruct the mental health system in reestablishing access to treatment and proven tools of treatment.

The authors have done their homework by gathering documents and personal interviews with key players that support their perception of the dynamics that led to our current state of mental health care. It is an outstanding book for the physician who is seeking to understand its development from forces that shape public policy, while *Out of Bedlam* tends to focus on what has occurred to make the mental health system what it is today. The book is easy and enjoyable to read. It is critical of organized psychiatry's ability to be a watchdog of dangerous trends and faults psychiatry for its lack of self-defense. The strength

of the book is that it gives a candid bird's-eye view of how the mental health system developed into its current embarrassing lack of care for the seriously mentally ill. The book's weakness is that it's so strong and impactful that it may be dismissed as simply a counterpropagandist attack against the antipsychiatry movement. Although the accusations of what has gone wrong and why are quite strong and may be argued with, the book is invaluable because it sets forth the right direction for the correction of the problem.

Carl C. Bell, MD
Community Mental Health Council, Inc
University of Illinois
School of Medicine
Jackson Park Hospital
Chicago

Technology and Society

Medical Technology and Society: An Interdisciplinary Perspective, by Joseph D. Bronzino, Vincent K. Smith, and Maurice L. Wade (*New Liberal Arts Series*), 571 pp, with illus, \$29.95, ISBN 0-262-02300-8, Cambridge, Mass, MIT Press, 1990.

This book focuses on the economic and ethical issues associated with the development and use of medical technology. The text is intended for liberal arts undergraduates and all those interested in the problems posed by the use of modern medical technology. Because the text targets a general audience, it presupposes no specialized knowledge on the part of its readers.

"technological, economic, and ethical issues associated with the evolution of America's health care provision system"

The book itself is divided into three parts. The first consists of three chapters and is intended to provide the reader with the basic tools necessary for analyzing the major technological, economic, and ethical issues associated with the evolution of America's health care provision system since the turn of the century. In chapter 1 the authors provide a synoptic overview of the development of medical practice and technology from earliest recorded history up until the present. Chapter 2 briefly explores the relationship between innovations in medical technology and changes in the economic policies of the United States since 1950. In addition, this chapter introduces the reader to the basic techniques of cost-benefit analysis. Finally, chapter 3 serves as an introduction to ethical theory.

Each of chapters 4 through 7, comprising the second part of the book, is devoted to an analysis of one specific area of medical technology. Typically, these chapters (1) evaluate technological innovations from a historical perspective, (2) explain how those technologies function in the health care setting, and then (3) examine the economic and ethical issues arising from the use of each technology. Chapter 4 focuses on cardiac technology (eg, pacemakers, the artificial heart), chapter 5 deals with technologies used in the intensive care unit to monitor and sustain cardiopulmonary function, chapter 6 examines the use of computers in health care, and chapter 7 deals with medical imaging procedures.

The last part of the book consists of a single chapter, which deals with economic and social issues that are not related to the development of any specific technology but instead cut across all technological innovations discussed in part 2. For example, chapter 8 not only attempts to determine whether the highly technological nature of modern medical care dehumanizes patients, but also asks whether preventive medicine or acute care/rescue medicine should receive higher priority in our society's health care budget.

Medical Technology and Society is well written and easy to understand. Furthermore, the text is innovative and possesses a number of strengths, of which I shall discuss two.

First, this is the only medical ethics text I know of that takes the time and trouble to introduce the reader to the fundamentals of cost-benefit analysis. Determining the economic costs and benefits of various courses of action is an important factor in arriving at a correct moral judgment; consequently, the authors do their readers a distinct service when they include the basic techniques of cost-benefit analysis within their text.

Second, *Medical Technology and Society* does a better job than most medical ethics texts in providing readers with a detailed understanding of the moral, economic, and social issues spawned by recent developments in medical technology. This is so because the authors take the time to place technological innovations within a historical context and, in addition, go into some detail to explain how such innovations function within the health care setting. For example, when the authors discuss the relationship between modern medicine and the possible dehumanization of patient care (pp 533-549), they clarify the issue with an enlightening discussion of various changes medicine has undergone over

the past 2000 years. Again, before discussing the economic and ethical issues associated with devices such as the artificial heart, the authors describe the fundamental principles of heart action (pp 137-144). Providing this information adds greatly to the reader's understanding of how artificial hearts, pacemakers, etc, work and also helps to set *Medical Technology and Society* apart from other "traditional" texts in medical ethics.

Despite my admiration for *Medical Technology and Society*, I suspect that some professors may be reluctant to adopt the text for classroom use because of its narrow focus. Not all problems in biomedical ethics relate directly to innovations in medical technology. For example, the moral problem of abortion is not directly and immediately tied to technological advance and, as a result, is not dealt with in *Medical Technology and Society*. Moreover, there are some issues that are directly tied to technological innovation that *Medical Technology and Society* neglects to mention, eg, genetic screening and recombinant DNA technology. Given omissions of this sort, some teachers may opt for a medical ethics text broader in scope.

Apart from the above, *Medical Technology and Society* may be criticized by some ethicists as being slightly biased against utilitarianism and in favor of Kantianism. I am not a devotee of utilitarianism, and even I felt that the discussion of ethical theories in chapter 3 unfairly favored Kantianism over utilitarianism.

In my opinion, the strengths of *Medical Technology and Society* far outweigh its weaknesses, and I would be happy to use the book as a classroom text. Also, I would recommend the book to anyone who has an interest in medical ethics.

James M. Humber, PhD
Georgia State University
Atlanta

Government Health Insurance

Borderline Medicine, by Roger Weisberg, 1 videocassette, color, 57 minutes, U-matic or VHS, \$395, rental \$75/3 days or \$101/5 days, Champaign, Ill, Carle Medical Communications, 1991.

In the face of continuing rising expenditures for health services in the United States, the government-financed and -administered health insurance in Canada is receiving a great deal of attention here. There are two reasons for this: in Canada the expenditure for health services has remained quite constant at 8% or so of the gross domestic product

(GDP), and all Canadians can receive hospital and physicians' services with no charge at time of service.

The differences between the Canadian and the US health services and health insurance have been documented in an hour-long television program, *Borderline Medicine*, narrated by the veteran TV reporter Walter Cronkite. The presentation is even-handed, with commentaries from health services policy experts from the United States both favorably and unfavorably disposed to the adoption of the Canadian system in this country. The facts presented are correct, such as continuing choice of physicians and hospitals in Canada as in the United States, the differences in expenditure levels, and the striking differences in the supply of high-technology services such as coronary artery bypass surgery, angioplasty, and other sophisticated diagnostic and treatment technology. Canada creates waiting lists for these high-technology procedures and in some cases sends patients to Detroit and Seattle, as reported in the film. A particularly graphic part of the documentary is the live presentation of several patients comparing Canada and the United States as to how their treatments, from obstetrics to cardiac, were managed and paid for.

"Canada creates waiting lists for . . . high-technology procedures and in some cases sends patients to Detroit and Seattle . . ."

The 37 million or so people in the United States with no insurance are played up as a serious deficiency in the US system and, rightly, as an appalling example of inequity. Canada seems so far to have traded less high technology for more primary care, whereas the United States has done the opposite.

The plight of the uninsured was discussed at length as if it was caused by the plurality of provision systems rather than a lack of a national public policy to cover them. The government could buy services for the uninsured from the existing delivery systems as it does for the Medicare patients. There are various ways to achieve universal health insurance. The implication of the documentary seems to be that if the United States adopted the Canadian pattern of federal-provincial (state) financing and administration, it could operate as reasonably effectively as Canada. There is no mention of the fact that the Canadian government forbids private insurance companies from competing with the sale of insurance-for-services covered by the

government system. This helps the Canadian system to control costs through a dual government budget, federal and provincial.

The documentary made no mention that the Canadian system forbids the sale of private health insurance that competes with services already paid for by government insurance, thus enabling more fiscal control from only two sources, the provinces and the federal government. It is extremely unlikely that the US Congress would forbid this choice to the American people, even though more fiscal control would be possible with fewer sources of funding. It is plausible to predict, given past experiences with the reluctance to tax ourselves, that the United States would finance a reasonably accessible health service or amenities that people in this country would want. What would emerge is that a rather large minority, the upper 40% of income, would also buy private insurance. If Canada continues to hold its expenditures to 8% of the GDP or even raises expenditures in constant relation to the GDP, Canada will not be able to maintain a modern health services provision system without using the United States as a high-technology backup.

Borderline Medicine is well done and worth seeing. Perhaps it can stimulate discussion and debate regarding the questions raised herein.

Odin W. Anderson, PhD
University of Wisconsin
Madison

Ethics, Technology

What Kind of Life: The Limits of Medical Progress, by Daniel Callahan, 318 pp, with illus, \$19.95, ISBN 0-671-67096-4, New York, NY, Simon & Schuster, 1990.

The focus of this work by Daniel Callahan is individualism vs the good of the community as played out on the wards of American medicine.

He is concerned about a runaway health care caused by the excessive expectations and demands of given patients to restore and maintain health, an aging population that dominates this claim, and a proliferation of medical science and technology that fuels the pursuit of health but never quite satisfies it. He warns that if these activities are unchecked, increasingly we will sacrifice other important social goods. He questions the wisdom of this quest for medical progress and the inordinate place of maintaining health in our scale of individual and social values.

He sees these problems as inadequately addressed by developing new schemes to reorganize health services;

by reining in the profits of physicians, health care institutions, or manufacturers of technology; or by the myriad other regulatory and cost-cutting devices that are suggested routinely in the medical literature. Neither does he think such factors basically cause our health care crisis. Rather, he points to values as the core of the problem, particularly the cultural value of seeking to foster the good of individuals by attempting to meet their limitless demand for medical resources.

His answer to this situation is to place boundaries on these aspirations. He attempts to define a different moral and cultural basis by which to distribute medical goods than one based on acquiescing to individual needs and claims for them—particularly the claims of the older segment of society with its demand that “aging be fought against.”

He argues that the focus of policy should become a concern for the collective health of society through promoting a healthy environment and preventive measures, with regard for the individual expressed more in terms of “care rather than cure,” and with basic and not unlimited efforts made to vanquish the illness of the individual, particularly if that person is very old. Society, he asserts, would be “well justified in the future to set an age limit on the public provision of expensive, life-extending, curative healthcare” and to “abandon the idea of unlimited progress—but not all progress—on the frontier of individual curative need.”

By addressing the centrality of cultural and moral values in the cost expansion of modern medicine, Callahan points us in the right direction: policy analyses of national health problems have given this inadequate attention. Troublesome, however, are two of his central suggestions. One concerns research policy. Since research is the engine producing technology, he would like research policy structured in a way that assigns priorities to the relief of conditions already well understood and that afflict children and younger adults, both of which policies would enhance the likelihood of better long-term outcome. He further would give preference to the needs of already surviving patients. He writes:

We should not, in short, go beyond those frontiers until we know how to improve life for those already existing, but poorly, within present frontiers. To use a military analogy: If we are going to conduct a war on various diseases, we should not extend our advance beyond our supply lines.

I don't agree with this goal and do not believe that those who do can accomplish it. The finding of biologic facts and

mechanisms is not a straight-line engineering process and cannot be so precisely directed as Callahan would wish. Different fields of biologic research have become increasingly interdependent. For example, research on the acquired immunodeficiency syndrome has helped us to penetrate biologic puzzles in cancer. Discoveries often are unanticipated, and combinations of knowledge produce novel extensions. Such a bounded research policy as he suggests, particularly when directed at basic biologic mechanisms, would be difficult, if not impossible, to pursue.

“ . . . the focus of policy should become a concern for the collective health of society . . . ”

A second significant proposal is that of using age as a prominent aspect of setting limits on the provision of health care. It must be noted that he discusses applying other criteria to limit the serving of individual curative need, such as outcome or efficacy standards, with which I agree. But the influence of aging and the elderly on health care use is quite important for him in defining the problem and the solution of the crisis he discusses. He argues that limits set on entire groups are less of an assault on a particular patient than denying treatment to that patient for special reasons. Patients and physicians, he believes, would be more accepting of such categorical standards, and they would be easier to carry out and more open to inspection than decisions based on personal standards applied at the bedside in nonuniform ways. I agree that categorical standards have such advantages and are important to develop and apply in health care. But to place as much significance on the use of the categorical standard of age in treating the elderly as Callahan does, calling it “the main way of restricting that frontier,” is unwise. I question the assumption he makes that we seek to extend life at any cost as we grow older. The introduction of the concept of the living will in the early 1970s was an important *patient-driven* expression of a growing view: that extending life is not good if that extension results in much suffering and greatly reduced function. People do not want to be preserved to suffer. Yet, largely because of the lack of adequate help in explaining and constructing living wills, today only about 10% of adults have made them. A significant effort by the medical profession to determine the preferences for treatment of the remaining adult part of the population would be one type of measure needed to meet the problems Callahan raises.

His suggested age standard policy introduces other issues, such as how to deal with the ethical concerns of families who, seeking to honor the value of gratitude they bear toward those elders who nurtured them, would, along with the patients themselves, find significant age-restrictive policies that prevented the use of beneficial therapy on them intolerable. Further, the concern for differences in people, seeing patients as unique, has a significance beyond the cultural and moral roots that Callahan focuses on. It has origins in the growth of a scientific medicine. It is a commonplace in medicine that one rarely sees a textbook case. It is the recognition of differences in patients that is at the heart of doing the tasks of doctoring well. The physician classifies patients through diagnosis as the first step to seeing what is unique. Medicine begins with linking patients but ends by separating them. Its art requires discerning and treating the untypical. Its groupings reflect shared experience, not common destiny. It is an illusion that people and the treatment of their illnesses are susceptible to rigid standardization except at establishing their relation to general categories such as offered by diagnostic sortings. Taking a class of persons as diverse as that obtained through the rigid standard of numerical age, and agreeing to treat them without reference to their differences, would force physicians to treat particular patients wrongly, set inappropriate precedents of practice that could extend to the treatment of other patients, and severely encumber the task of clinical work.

Finally, although the demand on medicine from the force of individualism is great, its pursuit has been vastly significant in galvanizing the creative energies of American society. What would be the larger effect on our society if individualism was successfully staunch in respect to health? Since limits on it would likely extend into other facets of society, would we be better off on the whole by having its significance diminished?

This is a challenging book, which makes a splendid effort to unite moral and policy analysis and succeeds at many levels. Callahan has many good thoughts on rationing and political strategies to achieve them too numerous to detail in this review. He deals with issues central to our times and tells us much that we can learn from, even when we disagree with him.

Stanley J. Reiser, MD, PhD
The University of Texas
Health Science Center at Houston

LAST YEAR, 448 DOCTORS GAVE UP PRIVATE PRACTICE FOR A CHALLENGING NEW CAREER.



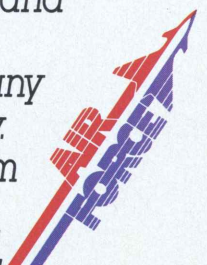
They didn't give up medicine. They just started practicing it in a more exhilarating environment.

An environment that affords them many tangible benefits. Like a diverse practice, unlimited access to medical specialties, and financial security. Plus a lot of intangibles. Like a comfortable lifestyle, an opportunity for worldwide experiences and the respect that goes along with being an Air Force officer.

Of course, to enter an environment this rewarding, they did have to give up a few things. Like rent, equipment expenses, malpractice insurance, payrolls and utility bills.

Now, you may be intrigued by such a unique opportunity. But like any good medical professional, you'd probably like a complete case history. So call 1-800-423-USA. Or send your curriculum vitae to Colonel William E. Patterson, United States Air Force/RSB, Randolph Air Force Base, Texas 78150-5421.

AIM HIGH.



**Microcirculatory
blood flow:**

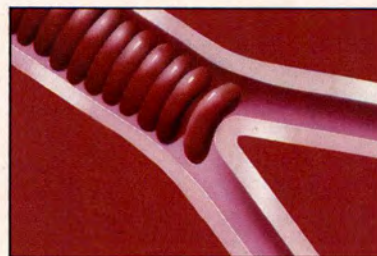
**Impaired by
peripheral
arterial
disease.**

**Improved by
Trental.[®]**
(pentoxifylline)



Increased blood viscosity

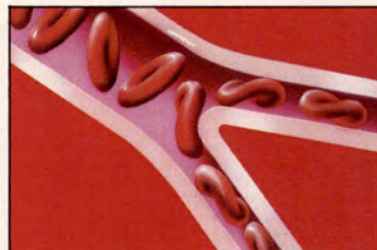
is often a result of diminished red blood cell flexibility downstream of a fixed obstruction.¹ Elevated plasma fibrinogen, as well as elevated red cell and platelet aggregation, contribute to hyperviscosity.¹⁻³



Patients at greatest risk from peripheral arterial disease are usually over 50, smokers, diabetics, hypertensives or present with elevated cholesterol/triglycerides.

Intermittent claudication is one of several symptoms characteristic of the disease.

Trental® (pentoxifylline) reduces blood viscosity,⁴ improving red cell flexibility,⁵ decreasing red cell and platelet aggregation,^{6,7} and decreasing elevated plasma fibrinogen.⁴

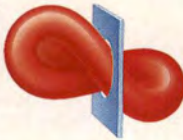


Trental® improves tissue oxygenation. A significant increase in calf muscle pO_2 has been demonstrated in patients with intermittent claudication following a single oral dose.⁸

For best results continue treatment at least 2-3 months. Depending on the severity and previous duration of ischemia, improvement as measured by increased walking distance to claudication may continue over weeks or months.

Although some benefit may be seen as early as two to four weeks, therapy of at least two to three months is recommended.

- Not a vasodilator
- Not an anticoagulant
- Not related to aspirin or dipyridamole

Trental® 
(pentoxifylline) 400 mg
Tablets

***The only proven-effective agent
for intermittent claudication,
a symptom of peripheral arterial disease***

Trental® can improve function and symptoms, but is not intended to replace more definitive therapy, such as surgery.

©1988 by Hoechst-Roussel Pharmaceuticals Inc.

Please see references and brief summary of prescribing information on following page.

References: 1. Chien S: Determinants of blood viscosity and red cell deformability. Abstracts: 6, International Symposium on Filterability and Red Blood Cell Deformability, Göteborg, Sweden, Sept 11-13, 1980. 2. Hanss MF: Filtration methods. Abstracts: 16, International Symposium on Filterability and Red Blood Cell Deformability, Göteborg, Sweden, Sept 11-13, 1980. 3. Lowe GDO, Drummond MM, Forbes CD, et al: Blood and plasma viscosity in prediction of venous thrombosis. Abstracts: 77, International Symposium on Filterability and Red Blood Cell Deformability, Göteborg, Sweden, Sept 11-13, 1980. 4. Müller R: Modification of disturbed flow properties of blood: a promising avenue in the treatment of peripheral vascular diseases. *Pharmatherapeutica* 1983;3(Suppl 1):5-17. 5. Stormer B, Kleinschmidt K, Loose D, et al: Rheological changes in the blood of patients with chronic arterial occlusive disease after the administration of vasoactive drugs. *Curr Med Res Opin* 1977;4:588-595. 6. Seiffge D: *IRCS Med Sci* 1980;8:727. 7. Nenci GG, Gresele P, Agnelli G, et al: Effect of pentoxifylline on platelet aggregation. *Pharmatherapeutica* 1981;2:532-538. 8. Ehrly AM: Effects of orally administered pentoxifylline on muscular oxygen pressure in patients with intermittent claudication. *IRCS Med Sci* 1982;10:401-402.

Trental® (pentoxifylline) Tablets, 400 mg

A brief summary of the Prescribing Information follows.

INDICATIONS AND USAGE:

Trental® (pentoxifylline) is indicated for the treatment of patients with intermittent claudication on the basis of chronic occlusive arterial disease of the limbs. Trental® (pentoxifylline) can improve function and symptoms but is not intended to replace more definitive therapy, such as surgical bypass, or removal of arterial obstructions when treating peripheral vascular disease.

CONTRAINDICATIONS:

Trental® (pentoxifylline) should not be used in patients who have previously exhibited intolerance to this product or methylxanthines such as caffeine, theophylline, and theobromine.

PRECAUTIONS:

General: Patients with chronic occlusive arterial disease of the limbs frequently show other manifestations of arteriosclerotic disease. Trental® (pentoxifylline) has been used safely for treatment of peripheral arterial disease in patients with concurrent coronary artery and cerebrovascular diseases, but there have been occasional reports of angina, hypotension, and arrhythmia. Controlled trials do not show that Trental® (pentoxifylline) causes such adverse effects more often than placebo, but, as it is a methylxanthine derivative, it is possible some individuals will experience such responses.

Drug Interactions: Although a causal relationship has not been established, there have been reports of bleeding and/or prolonged prothrombin time in patients treated with Trental® (pentoxifylline) with and without anticoagulants or platelet aggregation inhibitors. Patients on warfarin should have more frequent monitoring of prothrombin times, while patients with other risk factors complicated by hemorrhage (e.g., recent surgery, peptic ulceration) should have periodic examinations for bleeding including hematocrit and/or hemoglobin. Trental® (pentoxifylline) has been used concurrently with antihypertensive drugs, beta blockers, digitalis, diuretics, antidiabetic agents, and antiarrhythmics, without observed problems. Small decreases in blood pressure have been observed in some patients treated with Trental® (pentoxifylline); periodic systemic blood pressure monitoring is recommended for patients receiving concomitant antihypertensive therapy. If indicated, dosage of the antihypertensive agents should be reduced.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Long-term studies of the carcinogenic potential of pentoxifylline were conducted in mice and rats by dietary administration of the drug at doses up to approximately 24 times (570 mg/kg) the maximum recommended human daily dose (MRHD) of 24 mg/kg for 18 months in mice and 18 months in rats with an additional 6 months without drug exposure in the latter. No carcinogenic potential for pentoxifylline was noted in the mouse study. In the rat study, there was a statistically significant increase in benign mammary fibroadenomas in females in the high dose group (24x MRHD). The relevance of this finding to human use is uncertain since this was only a marginal statistically significant increase for a tumor that is common in aged rats. Pentoxifylline was devoid of mutagenic activity in various strains of *Salmonella* (Ames test) when tested in the presence and absence of metabolic activation.

Pregnancy: Category C. Teratogenic studies have been performed in rats and rabbits at oral doses up to about 25 and 10 times the maximum recommended human daily dose (MRHD) of 24 mg/kg, respectively. No evidence of fetal malformation was observed. Increased resorption was seen in rats at 25 times MRHD. There are, however, no adequate and well controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, Trental® (pentoxifylline) should be used during pregnancy only if clearly needed.

Nursing Mothers: Pentoxifylline and its metabolites are excreted in human milk. Because of the potential for tumorigenicity shown for pentoxifylline in rats, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness in children below the age of 18 years have not been established.

ADVERSE REACTIONS:

Clinical trials were conducted using either controlled-release Trental® (pentoxifylline) tablets for up to 60 weeks or immediate-release Trental® (pentoxifylline) capsules for up to 24 weeks. Dosage ranges in the tablet studies were 400 mg bid to tid and in the capsule studies, 200-400 mg tid.

The table summarizes the incidence (in percent) of adverse reactions considered drug related, as well as the numbers of patients who received controlled-release Trental®

(pentoxifylline) tablets, immediate-release Trental® (pentoxifylline) capsules, or the corresponding placebos. The incidence of adverse reactions was higher in the capsule studies (where dose related increases were seen in digestive and nervous system side effects) than in the tablet studies. Studies with the capsule include domestic experience, whereas studies with the controlled-release tablets were conducted outside the U.S. The table indicates that in the tablet studies few patients discontinued because of adverse effects.

INCIDENCE (%) OF SIDE EFFECTS

	Controlled-Release Tablets		Immediate-Release Capsules	
	Commercially Available Trental®	Placebo	Used only for Controlled Clinical Trials Trental®	Placebo
(Numbers of Patients at Risk)	(321)	(128)	(177)	(138)
Discontinued for Side Effect	3.1	0	9.6	7.2
CARDIOVASCULAR SYSTEM				
Angina/Chest Pain	0.3	—	1.1	2.2
Arrhythmia/Palpitation	—	—	1.7	0.7
Flushing	—	—	2.3	0.7
DIGESTIVE SYSTEM				
Abdominal Discomfort	—	—	4.0	1.4
Belching/Flatus/Bloating	0.6	—	9.0	3.6
Diarrhea	—	—	3.4	2.9
Dyspepsia	2.8	4.7	9.6	2.9
Nausea	2.2	0.8	28.8	8.7
Vomiting	1.2	—	4.5	0.7
NERVOUS SYSTEM				
Agitation/Nervousness	—	—	1.7	0.7
Drowsiness	1.9	3.1	11.9	4.3
Disorientation	—	—	1.1	5.8
Headache	1.2	1.6	6.2	5.8
Insomnia	—	—	2.3	2.2
Tremor	0.3	0.8	—	—
Blurred Vision	—	—	2.3	1.4

Trental® (pentoxifylline) has been marketed in Europe and elsewhere since 1972. In addition to the above symptoms, the following have been reported spontaneously since marketing or occurred in other clinical trials with an incidence of less than 1%; the causal relationship was uncertain:

Cardiovascular—dyspnea, edema, hypotension.
Digestive—anorexia, cholecystitis, constipation, dry mouth/thirst.
Nervous—anxiety, confusion.
Respiratory—epistaxis, flu-like symptoms, laryngitis, nasal congestion.
Skin and Appendages—brittle fingernails, pruritus, rash, urticaria, angioedema.
Special Senses—blurred vision, conjunctivitis, earache, scotoma.
Miscellaneous—bad taste, excessive salivation, leukopenia, malaise, sore throat/swollen neck glands, weight change.

A few rare events have been reported spontaneously worldwide since marketing in 1972. Although they occurred under circumstances in which a causal relationship with pentoxifylline could not be established, they are listed to serve as information for physicians: Cardiovascular—angina, arrhythmia, tachycardia; Digestive—hepatitis, jaundice, increased liver enzymes; and Hematologic and Lymphatic—decreased serum fibrinogen, pancytopenia, aplastic anemia, purpura, thrombocytopenia.

OVERDOSAGE:

Overdosage with Trental® (pentoxifylline) has been reported in children and adults. Symptoms appear to be dose related. A report from a poison control center on 44 patients taking overdoses of enteric-coated pentoxifylline tablets noted that symptoms usually occurred 4-5 hours after ingestion and lasted about 12 hours. The highest amount ingested was 80 mg/kg; flushing, hypotension, convulsions, somnolence, loss of consciousness, fever, and agitation occurred. All patients recovered. In addition to symptomatic treatment and gastric lavage, special attention must be given to supporting respiration, maintaining systemic blood pressure, and controlling convulsions. Activated charcoal has been used to adsorb pentoxifylline in patients who have overdosed.

DOSE AND ADMINISTRATION:

The usual dosage of Trental® (pentoxifylline) in controlled-release tablet form is one tablet (400 mg) three times a day with meals. While the effect of Trental® (pentoxifylline) may be seen within 2 to 4 weeks, it is recommended that treatment be continued for at least 8 weeks. Efficacy has been demonstrated in double-blind clinical studies of 6 months duration. Digestive and central nervous system side effects are dose related. If patients develop these side effects it is recommended that the dosage be lowered to one tablet twice a day (800 mg/day). If side effects persist at this lower dosage, the administration of Trental® (pentoxifylline) should be discontinued. Edition 2/88

Trental® REG TM HOECHST AG

Hoechst-Roussel Pharmaceuticals Inc.

Somerville, New Jersey 08876

The name and logo HOECHST are registered trademarks of Hoechst AG.

Hoechst 

Help your patients take a step toward early detection and treatment of P.A.D....

Send away today or ask your Hoechst-Roussel representative for your free supply of our patient education booklet, "Step Lively".

Name _____
Address _____
City _____ State _____ Zip _____

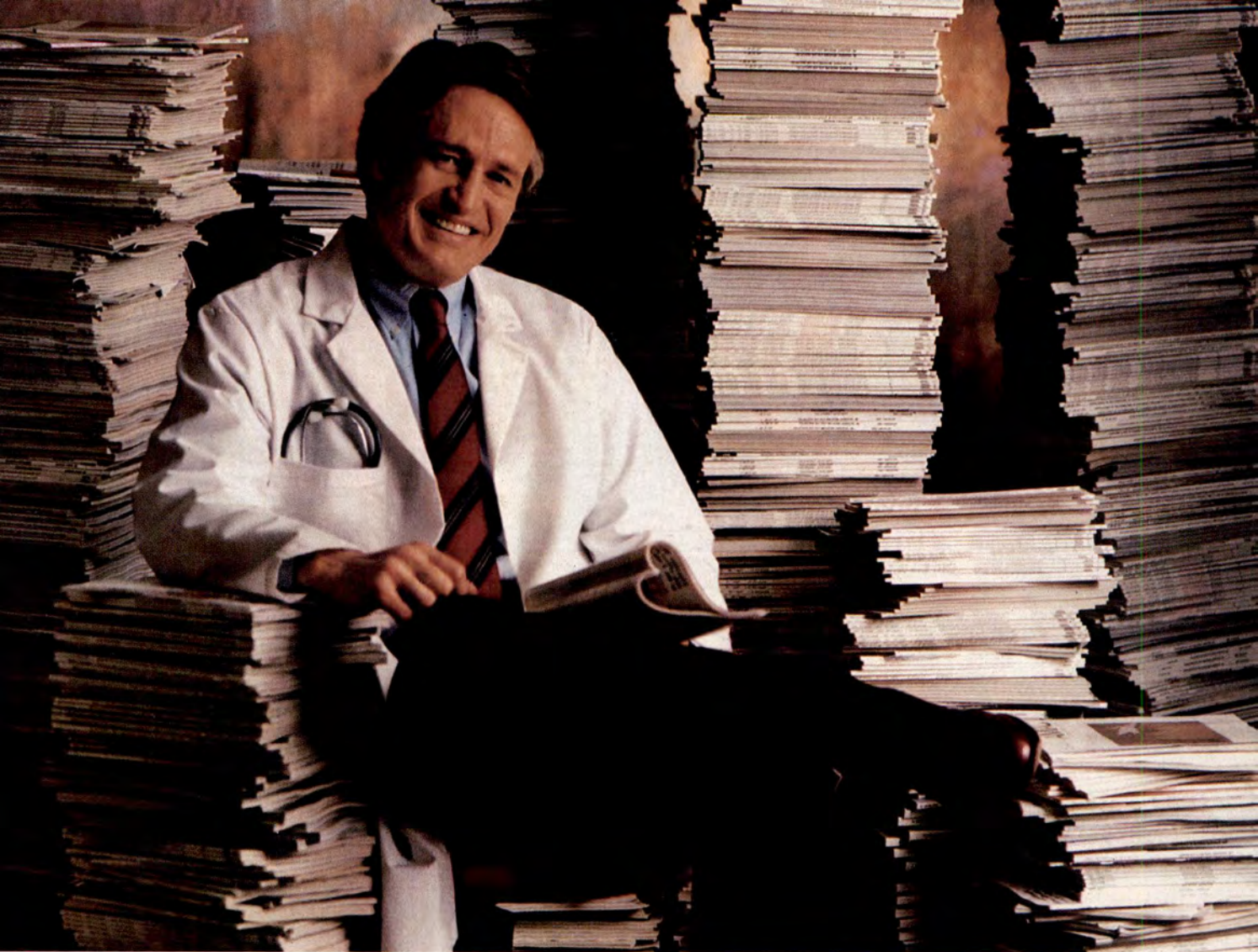
Cut out and mail to: Step Lively, HOECHST-ROUSSEL PHARMACEUTICALS INC., P.O. Box 831, Andover, New Jersey 07821



Trental® 400 mg Tablets
(pentoxifylline)

The only proven-effective agent for intermittent claudication, a symptom of peripheral arterial disease

Q73142-1088



The best advertising for CAPOTEN
isn't found in ads.

You'll find it in an extensive
body of literature and in
the personal experience of
CAPOTEN prescribers.

In hypertension*

*CAPOTEN may be used as initial therapy in hypertension only for patients with normal renal function in whom the risk of neutropenia/agranulocytosis is relatively low (1 out of over 8,600 in clinical trials). Use special precautions in patients with impaired renal function, collagen vascular disorders, or those exposed to other drugs known to affect the white blood cells or immune response. Evaluation of hypertensives should always include assessment of renal function. CAPOTEN may be dosed bid or tid. See brief summary of prescribing information on the adjacent page.



CAPOTEN[®] BID
(captopril tablets)

Count on it.

CAPOTEN® TABLETS

Captopril Tablets

INDICATIONS: Hypertension—CAPOTEN (captopril) is indicated for the treatment of hypertension. Consideration should be given to the risk of neutropenia/agranulocytosis (see WARNINGS). CAPOTEN is effective alone and in combination with other antihypertensive agents, especially thiazide-type diuretics.

Heart Failure: CAPOTEN (captopril) is indicated in the treatment of congestive heart failure in patients who have not responded adequately to treatment with diuretics and digitalis. CAPOTEN should generally be added to both of these agents except when digitalis use is poorly tolerated or otherwise not feasible.

CONTRAINDICATIONS: CAPOTEN is contraindicated in patients who are hypersensitive to this product or any other angiotensin-converting enzyme inhibitor (e.g., a patient who has experienced angioedema during therapy with any other ACE inhibitor).

WARNINGS: **Angioedema:** Angioedema involving the extremities, face, lips, mucous membranes, tongue, glottis or larynx has been reported in patients treated with ACE inhibitors, including captopril. If angioedema involves the tongue, glottis or larynx, airway obstruction may occur and be fatal. Emergency therapy, including but not necessarily limited to, subcutaneous administration of a 1:1000 solution of epinephrine should be promptly instituted.

Neutropenia/Agranulocytosis: Neutropenia ($<1000/\text{mm}^3$) with myeloid hypoplasia has resulted from use of captopril. About half of the neutropenic patients developed systemic or oral cavity infections or other features of the syndrome of agranulocytosis. The risk of neutropenia is dependent on the clinical status of the patient:

In clinical trials in patients with hypertension who have normal renal function (serum creatinine less than 1.6 mg/dL and no collagen vascular disease), neutropenia has been seen in one patient out of over 8,600 exposed. In patients with some degree of renal failure (serum creatinine at least 1.6 mg/dL) but no collagen vascular disease, the risk in clinical trials was about 1 per 500. Doses were relatively high in these patients, particularly in view of their diminished renal function. In patients with collagen vascular diseases (e.g., systemic lupus erythematosus, scleroderma) and impaired renal function, neutropenia occurred in 3.7% of patients in clinical trials. While none of the over 750 patients in formal clinical trials of heart failure developed neutropenia, it has occurred during the subsequent clinical experience. Of reported cases, about half had serum creatinine ≥ 1.6 mg/dL and more than 75% received procainamide. In heart failure, it appears that the same risk factors for neutropenia are present.

Neutropenia has appeared usually within 3 months after starting therapy, associated with myeloid hypoplasia and frequently accompanied by erythroid hypoplasia and decreased numbers of megakaryocytes (e.g., hypoplastic bone marrow and pancytopenia); anemia and thrombocytopenia were sometimes seen. Neutrophils generally returned to normal in about 2 weeks after captopril was discontinued, and serious infections were limited to clinically complex patients. About 13% of the cases of neutropenia have ended fatally, but almost all fatalities were in patients with serious illness, having collagen vascular disease, renal failure, heart failure or immunosuppressant therapy, or a combination of these complicating factors. **Evaluation of the hypertensive or heart failure patient should always include assessment of renal function.** If captopril is used in patients with impaired renal function, white blood cell and differential counts should be evaluated prior to starting treatment and at approximately 2-week intervals for about 3 months, then periodically. In patients with collagen vascular disease or who are exposed to other drugs known to affect the white cells or immune response, particularly when there is impaired renal function, captopril should be used only after an assessment of benefit and risk, and then with caution. All patients treated with captopril should be told to report any signs of infection (e.g., sore throat, fever). If infection is suspected, perform white cell counts without delay. Since discontinuation of captopril and other drugs has generally led to prompt return of the white count to normal, upon confirmation of neutropenia (neutrophil count $<1000/\text{mm}^3$) withdraw captopril and closely follow the patient's course.

Proteinuria: Total urinary proteins >1 g per day were seen in about 0.7% of patients on captopril. About 90% of affected patients had evidence of prior renal disease or received high doses (>150 mg/day), or both. The nephrotic syndrome occurred in about one-fifth of proteinuric patients. In most cases, proteinuria subsided or cleared within 6 months whether or not captopril was continued. The BUN and creatinine were seldom altered in proteinuric patients. Since most cases of proteinuria occurred by the 8th month of therapy with captopril, patients with prior renal disease or those receiving captopril at doses >150 mg per day, should have urinary protein estimates (dip-stick on 1st morning urine) before therapy, and periodically thereafter.

Hypotension: Excessive hypotension was rarely seen in hypertensive patients but is a possible consequence of captopril use in salt/volume depleted persons (such as those treated vigorously with diuretics), patients with heart failure or those patients undergoing renal dialysis. (See PRECAUTIONS [Drug Interactions].) In heart failure, where the blood pressure was either normal or low, transient decreases in mean blood pressure $>20\%$ were recorded in about half of the patients. This transient hypotension is more likely to occur after any of the first several doses and is usually well tolerated, although rarely it has been associated with arrhythmia or conduction defects. A starting dose of 6.25 or 12.5 mg tid may minimize the hypotensive effect. Patients should be followed closely for the first 2 weeks of treatment and whenever the dose of captopril and/or diuretic is increased.

BECAUSE OF THE POTENTIAL FALL IN BLOOD PRESSURE IN THESE PATIENTS, THERAPY SHOULD BE STARTED UNDER VERY CLOSE MEDICAL SUPERVISION.

PRECAUTIONS: General: **Impaired Renal Function:** Hypertension—Some hypertensive patients with renal disease, particularly those with severe renal artery stenosis, have developed increases in BUN and serum creatinine. It may be necessary to reduce captopril dosage and/or discontinue diuretic. For some of these patients, normalization of blood pressure and maintenance of adequate renal perfusion may not be possible. **Heart Failure:** About 20% of patients develop stable elevations of BUN and serum creatinine $>20\%$ above normal or baseline upon long-term treatment. Less than 5% of patients, generally with severe preexisting renal disease, required discontinuation due to progressively increasing creatinine. See DOSAGE AND ADMINISTRATION, ADVERSE REACTIONS [Altered Laboratory Findings]. **Hyperkalemia:** Elevations in serum potassium have been observed in some patients treated with ACE inhibitors, including captopril. When treated with ACE inhibitors, patients at risk for the development of hyperkalemia include those with: renal insufficiency; diabetes mellitus; and those using concomitant potassium-sparing diuretics, potassium supplements or potassium-containing salt substitutes; or other drugs associated with increases in serum potassium. (See PRECAUTIONS: Drug Interactions; ADVERSE REACTIONS: Altered Laboratory Findings.) **Valvular Stenosis:** A theoretical concern, for risk of decreased coronary perfusion, has been noted regarding vasodilator treatment in patients with aortic stenosis due to decreased afterload reduction. **Surgery/Anesthesia:** If hypotension occurs during surgery or anesthesia, and is considered due to the effects of captopril, it is correctable by volume expansion.

Drug Interactions: **Hypotension—Patients on Diuretic Therapy:** Precipitous reduction of blood pressure may occasionally occur within the 1st hour after administration of the initial captopril dose in patients on diuretics, especially those recently placed on diuretics, and those on severe dietary salt restriction or dialysis. This possibility can be minimized by either discontinuing the diuretic or increasing the salt intake about 1 week prior to initiation of captopril therapy or by initiating therapy with small doses (6.25 or 12.5 mg). Alternatively, provide medical supervision for at least 1 hour after the initial dose.

Agents Having Vasodilator Activity: In heart failure patients, vasodilators should be administered with caution.

Agents Causing Renin Release: Captopril's effect will be augmented by antihypertensive agents that cause renin release.

Agents Affecting Sympathetic Activity: The sympathetic nervous system may be especially important in supporting blood pressure in patients receiving captopril alone or with diuretics. Beta-adrenergic blocking drugs add some further antihypertensive effect to captopril, but the overall response is less than additive. Therefore, use agents affecting sympathetic activity (e.g., ganglionic blocking agents or adrenergic neuron blocking agents) with caution.

Agents Increasing Serum Potassium: Give potassium-sparing diuretics or potassium supplements only for documented hypokalemia, and then with caution, since they may lead to a significant increase of serum potassium. Use potassium-containing salt substitutes with caution.

Inhibitors of Endogenous Prostaglandin Synthesis: Indomethacin and other nonsteroidal anti-inflammatory agents may reduce the antihypertensive effect of captopril, especially in low renin hypertension.

Lithium—Increased serum lithium levels and symptoms of lithium toxicity have been reported in patients receiving concomitant lithium and ACE inhibitor therapy. These drugs should be coadministered with caution and frequent monitoring of serum lithium levels is recommended. If a diuretic is also used, it may increase the risk of lithium toxicity.

Drug/Laboratory Test Interaction: Captopril may cause a false-positive urine test for acetone.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Two-year studies with doses of 50 to 1350 mg/kg/day in mice and rats failed to show any evidence of carcinogenic potential. Studies in rats have revealed no impairment of fertility.

Pregnancy: Category C: Embryocidal effects and craniofacial malformations were observed in rabbits. **Human Experience:** There are no adequate and well-controlled studies of captopril in pregnant women. Data are available that show captopril crosses the human placenta. Captopril should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Based on post-marketing experience with all ACE inhibitors, the following information has been collected. Inadvertent exposure limited to the first trimester of pregnancy does not appear to affect fetal outcome adversely. Fetal exposure during the second and third trimester of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors but it is not clear whether they are related to ACE inhibition, maternal hypotension or the underlying prematurity.

There is no experience with exchange transfusion, hemodialysis or peritoneal dialysis for removing captopril from the neonatal circulation.

Nursing Mothers: Concentrations of captopril in human milk are approximately one percent of those in maternal blood. Because of the potential for serious adverse reactions in nursing infants from captopril, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of CAPOTEN to the mother. (See PRECAUTIONS: Pediatric Use.)

Pediatric Use: Safety and effectiveness in children have not been established. There is limited experience reported in the literature with the use of captopril in the pediatric population; dosage, on a weight basis, was generally reported to be comparable to or less than that used in adults.

Infants, especially newborns, may be more susceptible to the adverse hemodynamic effects of captopril. Excessive, prolonged and unpredictable decreases in blood pressure and associated complications, including oliguria and seizures, have been reported.

CAPOTEN (captopril) should be used in children only if other measures for controlling blood pressure have not been effective.

ADVERSE REACTIONS: Reported incidences are based on clinical trials involving approximately 7000 patients.

Renal: About 1 of 100 patients developed proteinuria (see WARNINGS). Renal insufficiency, renal failure, nephrotic syndrome, polyuria, oliguria, and urinary frequency in 1 to 2 of 1000 patients.

Hematologic: Neutropenia/agranulocytosis has occurred (see WARNINGS). Anemia, thrombocytopenia, and pancytopenia have been reported.

Dermatologic: Rash, (usually maculopapular, rarely urticarial), often with pruritus, and sometimes with fever and eosinophilia, in about 4 to 7 of 100 patients (depending on renal status and dose), usually during the 1st 4 weeks of therapy. Pruritus, without rash, in about 2 of 100 patients. A reversible associated pemphigoid-like lesion, and photosensitivity, have also been reported. Flushing or pallor in 2 to 5 of 1000 patients.

Cardiovascular: Hypotension may occur; see WARNINGS and PRECAUTIONS [Drug Interactions] for discussion of hypotension with captopril therapy. Tachycardia, chest pain, and palpitations each in about 1 of 100 patients. Angina pectoris, myocardial infarction, Raynaud's syndrome, and congestive heart failure each in 2 to 3 of 1000 patients.

Dysgeusia: Approximately 2 to 4 (depending on renal status and dose) of 100 patients developed a diminution or loss of taste perception; taste impairment is reversible and usually self-limited even with continued drug use (2 to 3 months).

Angioedema: Angioedema involving the extremities, face, lips, mucous membranes, tongue, glottis or larynx has been reported in approximately one in 1000 patients. Angioedema involving the upper airways has caused fatal airway obstruction. (See WARNINGS.)

Cough: Cough has been reported in 0.5-2% of patients treated with captopril in clinical trials.

The following have been reported in about 0.5 to 2 percent of patients but did not appear to increase frequency compared to placebo or other treatments used in controlled trials: gastric irritation, abdominal pain, nausea, vomiting, diarrhea, anorexia, constipation, aphthous ulcers, peptic ulcer, dizziness, headache, malaise, fatigue, insomnia, dry mouth, dyspnea, cough, alopecia, paresthesias.

Other clinical adverse effects reported since the drug was marketed are listed below by body system. In this setting, an incidence or causal relationship cannot be accurately determined.

General: Asthenia, gynecomastia.

Cardiovascular: Cardiac arrest, cerebrovascular accident/insufficiency, rhythm disturbances, orthostatic hypotension, syncope.

Dermatologic: Bullous pemphigus, erythema multiforme (including Stevens-Johnson syndrome), exfoliative dermatitis.

Gastrointestinal: Pancreatitis, glossitis, dyspepsia.

Hematologic: Anemia, including aplastic and hemolytic.

Hepatobiliary: Jaundice, hepatitis, including rare cases of necrosis, cholestasis.

Metabolic: Symptomatic hyponatremia.

Musculoskeletal: Myalgia, myasthenia.

Nervous/Psychiatric: Ataxia, confusion, depression, nervousness, somnolence.

Respiratory: Bronchospasm, eosinophilic pneumonitis, rhinitis.

Special Senses: Blurred vision.

Urogenital: Impotence.

As with other ACE inhibitors, a syndrome has been reported which may include: fever, myalgia, arthralgia, interstitial nephritis, vasculitis, rash or other dermatologic manifestations, eosinophilia and an elevated ESR. Findings have usually resolved with discontinuation of treatment.

Altered Laboratory Findings: **Serum Electrolytes:** Hyperkalemia: small increases in serum potassium, especially in patients with renal impairment (see PRECAUTIONS).

Hyponatremia: particularly in patients receiving a low sodium diet or concomitant diuretics.

BUN/Serum Creatinine: Transient elevations of BUN or serum creatinine especially in volume or salt depleted patients or those with renovascular hypertension may occur. Rapid reduction of long-standing or markedly elevated blood pressure can result in decreases in the glomerular filtration rate and, in turn, lead to increases in BUN or serum creatinine.

Hematology: A positive ANA has been reported.

Liver Function Tests: Elevations of liver transaminases, alkaline phosphatase, and serum bilirubin have occurred.

OVERDOSAGE: Primary concern is correction of hypotension. Volume expansion with an I.V. infusion of normal saline is the treatment of choice for restoration of blood pressure. Captopril may be removed from the general circulation by hemodialysis.

DOSAGE AND ADMINISTRATION: CAPOTEN (captopril) should be taken one hour before meals. In hypertension, CAPOTEN may be dosed bid or tid. Dosage must be individualized; see DOSAGE AND ADMINISTRATION section of package insert for detailed information regarding dosage in hypertension and in heart failure. Because CAPOTEN (captopril) is excreted primarily by the kidneys, dosage adjustments are recommended for patients with impaired renal function.

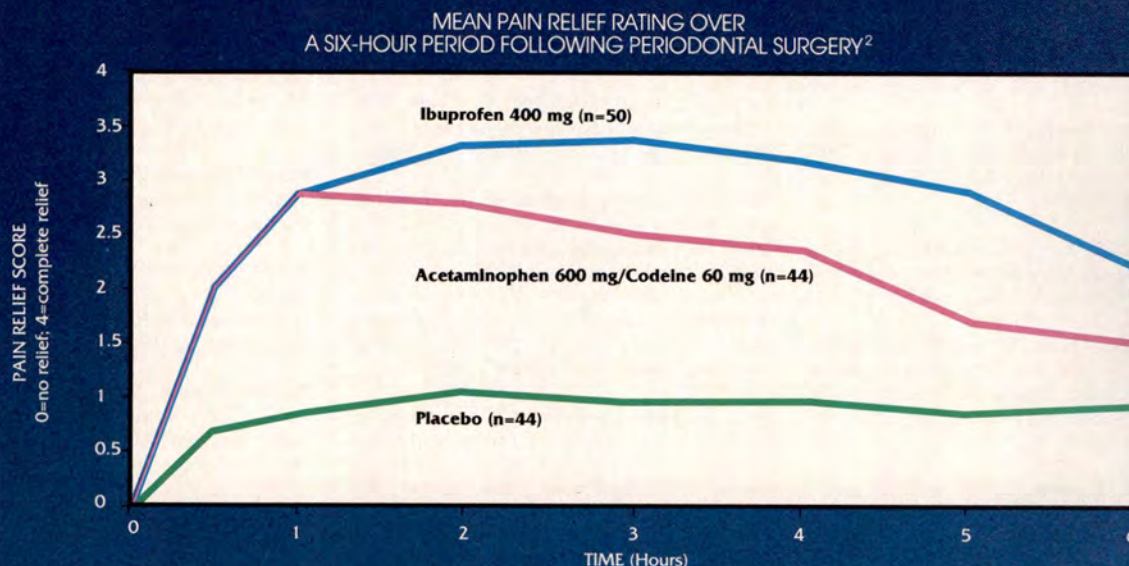
Consult package insert before prescribing CAPOTEN (captopril).

HOW SUPPLIED: Available in tablets of: 12.5 mg in bottles of 100 and 1000; 25 mg in bottles of 100, 1000, and 5000; 50 mg in bottles of 100 and 1000; 100 mg in bottles of 100; and in UNIMATIC® unit-dose packs of 100 tablets.

(J3-658U)

CONSIDER THESE NEW CLINICAL FINDINGS:

Two Advil® tablets (ibuprofen 400 mg) were shown to be significantly more effective than two Tylenol® (600 mg) with Codeine (60 mg) No. 3  tablets in two dental pain studies^{1,2}



Ibuprofen (400 mg) provided significantly better pain relief and pain reduction than acetaminophen (600 mg) with codeine (60 mg) following periodontal surgery (n = 138)²

One Advil tablet (ibuprofen 200 mg) provides effective pain relief*

Excellent safety profile



should be your #1 choice for OTC analgesia

References: 1. Cooper SA, Greene JJ, Schachtel BP, et al.: Ibuprofen 400 mg compared to acetaminophen 600 mg with codeine 60 mg. *Clin Pharmacol Ther* 45:176, 1989. 2. Schachtel BP, Fazio RC, Greene JJ: Ibuprofen 400 mg compared to acetaminophen 600 mg with codeine 60 mg for pain relief following periodontal surgery. *J Clin Pharmacol* 30:846, 1990.

Please advise patients to read and follow product labeling. Patients should not take this product if they have had a severe allergic reaction to aspirin.

*Indicated for the temporary relief of minor aches and pains associated with the common cold, headache, toothache, muscular aches, backache, for the minor pain of arthritis, for the pain of menstrual cramps, and for the reduction of fever.

Appearance of the brown ADVIL tablet and caplet is a trademark of Whitehall Laboratories, N.Y., N.Y. © 1990

WHITEHALL LABORATORIES A HEALTH CARE DIVISION OF AMERICAN HOME PRODUCTS CORPORATION

Obituary Listing

ARMSTRONG-RESSY, Carlos T., 67; Hato Rey, Puerto Rico; *Meharry Medical College School of Medicine*, 1946; certified by the American Board of Physical Medicine and Rehabilitation; died April 2, 1990.

BADGER, Demarious A. C., 80, © Albuquerque, NM; *University of Michigan Medical School*, 1934; died December 11, 1990.

BATTALORA, George C., Sr., 90, © Pass Christian, Miss; *Tulane University School of Medicine*, 1920; certified by the American Board of Orthopaedic Surgery; died October 10, 1990.

BERGER, Gustave K., 60, © Wilmington, Del; *Faculteit der Geneeskunde, Katholieke Universiteit Leuven*, Belgium, 1957; died November 25, 1990.

BRINK, Donald M., 81; Hutchinson, Minn; *The University of Minnesota Medical School*, 1937; died October 1, 1990.

BROCKBANK, Thomas William, 97, © Boca Raton, Fla; *Georgetown University School of Medicine*, 1924; certified by the American Board of Psychiatry and Neurology; died November 13, 1990.

CAMPBELL, Lorne A., Jr., 79, © Clear Lake, Wis; *The University of Minnesota Medical School*, 1939; died March 25, 1990.

CASSADAY, Charles Edgar, 77, © Mount Vernon, Ohio; *University of Cincinnati College of Medicine*, 1941; died November 13, 1990.

COOKE, Everette Ellis, 71, © Oklahoma City, Okla; *University of Oklahoma College of Medicine*, 1943; certified by the American Board of Surgery; died November 19, 1990.

CROSLEY, Willard Boaz, 79, © Glendale, Calif; *Case Western Reserve University School of Medicine*, 1940; certified by the American Board of Obstetrics and Gynecology; died November 20, 1990.

DAVIES, Nicholas Edward, 65, © Atlanta, Ga; *University of Virginia School of Medicine*, 1952; certified by the American Board of Internal Medicine; died April 5, 1991.

DE BONIS, Anthony M., 59; Wynantskill, NY; *Facoltà di Medicina e Chirurgia, Università di Bologna*, Italy, 1960; certified by the American Board of Internal Medicine; died November 8, 1990.

DOLINSKY, Aaron, 64; White Plains, NY; *Medical College of Georgia School of Medicine*, 1953; certified by the American Board of Psychiatry and Neurology; died December 29, 1990.

© Indicates member of the American Medical Association.
Obituary listing compiled by the Department of Physician Biographic Records.

DUGGAN, John Joseph, Jr., 66; St Louis, Mo; *Louisiana State University School of Medicine in New Orleans*, 1948; died November 19, 1990.

DUNN, John C., 77; Apopka, Fla; *Georgetown University School of Medicine*, 1937; certified by the American Board of Orthopaedic Surgery; died April 9, 1990.

FERNANDEZ, Serafin G., 85; Miami, Fla; *Instituto Superior de Ciencias Médicas de La Habana*, Havana, Cuba, 1928; died May 1, 1990.

FORSTER, Stuart William, 44; New York, NY; *Albert Einstein College of Medicine of Yeshiva University*, 1975; died January 11, 1991.

GALLAGER, Harry Stephen, 68, © Houston, Tex; *Temple University School of Medicine*, 1946; certified by the American Board of Pathology; died December 8, 1990.

HAMBRICK, Edward R., 72; San Francisco, Calif; *Meharry Medical College School of Medicine*, 1944; died October 7, 1990.

HELLER, Philip Henri, 71, © Hilton Head Island, SC; *Northwestern University Medical School*, 1945; certified by the American Board of Family Practice; died January 10, 1991.

HOLLAND, John J., 63, © Fort Myers, Fla; *Loyola University of Chicago Stritch School of Medicine*, 1953; certified by the American Board of Ophthalmology; died December 16, 1990.

HOOTON, T. Campbell, 87, © San Mateo, Calif; *Columbia University College of Physicians and Surgeons*, 1932; died August 15, 1990.

ISAACSON, Stanford I., 74, © Pittsburgh, Pa; *University of Pittsburgh School of Medicine*, 1943; certified by the American Board of Internal Medicine; died April 30, 1990.

JONES, Francis A., Jr., 81, © St Joseph, Mich; *Yale University School of Medicine*, 1935; certified by the American Board of Obstetrics and Gynecology; died December 2, 1989.

KARP, Howard N., 64; Santa Barbara, Calif; *Ohio State University College of Medicine*, 1949; certified by the American Board of Psychiatry and Neurology; died August 11, 1990.

KELLEY, Paul Robert John, 63; Skokie, Ill; *University of Illinois College of Medicine*, 1955; died November 3, 1990.

KRESGE, Charles Leslie, 45; Middletown, Ohio; *Indiana University School of Medicine*, 1971; certified by the American Board of Family Practice; died November 22, 1990.

LANDO, Leon, 80; Palos Heights, Ill; *University of Health Sciences, The Chicago Medical School*, 1937; died May 29, 1990.

LESSE, Stanley, 68, © New York, NY; *Jefferson Medical College of Thomas Jefferson University*, 1945; certified by the American Board of Psychiatry and Neurology; died December 20, 1990.

LEWIS, Letteer G. H., 81, © Galva, Kan; *University of Kansas Medical Center, School of Medicine*, 1937; died December 3, 1990.

LOOMIS, Leonard Joseph, 33; Oak Park, Ill; *University of Rochester School of Medicine and Dentistry*, 1985; died May 13, 1990.

MICHAELSON, Ernest, 76, © Fort Lauderdale, Fla; *University of Maryland School of Medicine*, 1938; died January 13, 1991.

NISHIGAYA, Toru, 78, © Honolulu, Hawaii; *Tulane University School of Medicine*, 1938; died November 2, 1990.

PRIMAKOFF, Harry William, 87, © Baltimore, Md; *George Washington University School of Medicine and Health Sciences*, 1928; died September 13, 1990.

RAVDIN, Emile M., 72, © Los Angeles, Calif; *Indiana University School of Medicine*, 1942; certified by the American Board of Ophthalmology; died August 30, 1990.

RICHARDSON, G. Robert, 49; Johns Island, SC; *Medical University of South Carolina College of Medicine*, 1967; certified by the American Board of Pediatrics; died November 4, 1990.

RICHEY, Leo Delano, 78, © Elgin, Ill; *University of Health Science, The Chicago Medical School*, 1942; died September 6, 1990.

ROLLINS, Marvin, 67, © Chagrin Falls, Ohio; *Case Western Reserve University School of Medicine*, 1952; certified by the American Board of Radiology; died December 4, 1990.

SANBORN, Neal Duane, 66, © Chula Vista, Calif; *University of Colorado School of Medicine*, 1947; certified by the American Board of Preventive Medicine; died April 3, 1990.

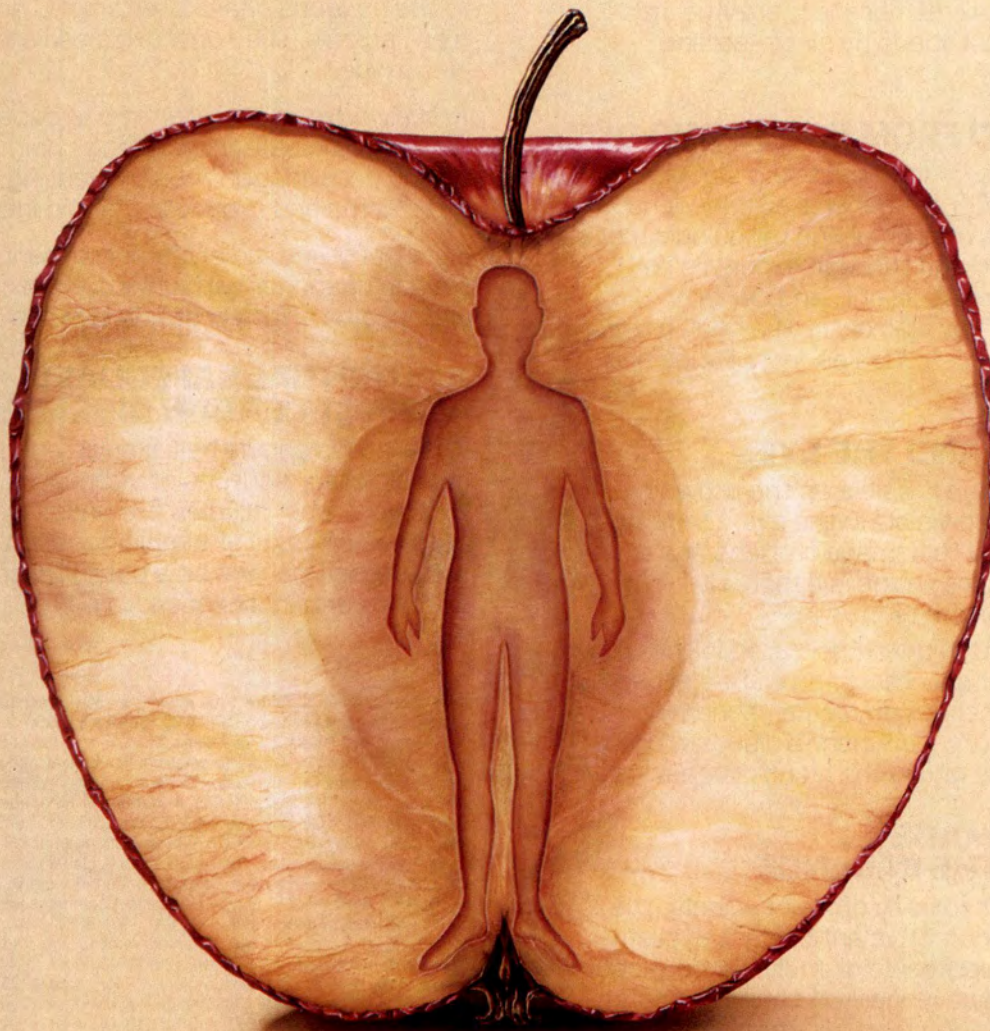
ST CLAIR, Robert Theron, 83, © Visalia, Calif; *The University of Minnesota Medical School*, 1937; certified by the American Board of Ophthalmology; died July 7, 1990.

THOMPSON, Douglas J., 68; Port Arthur, Tex; *University of Virginia School of Medicine*, 1949; died October 11, 1990.

VLASIS, George P., 71, © Oak Lawn, Ill; *University of Illinois College of Medicine*, 1943; certified by the American Board of Obstetrics and Gynecology; died January 5, 1991.

WHITTIER, John Rensselaer, 71; Orient, NY; *Columbia University College of Physicians and Surgeons*, 1943; certified by the American Board of Psychiatry and Neurology; died October 3, 1990.

**OXIDATIVE DAMAGE...
INSIDE THE BODY IT'S CAUSED
BY FREE RADICALS**



AT RISK: VITAL CELLULAR COMPONENTS

SINGLET OXYGEN AND FREE RADICALS CAN BE HAZARDOUS TO YOUR HEALTH

They can injure cells and even kill them. They can cause peroxidation of polyunsaturated fatty acids in cell membranes, enzyme inactivation, and mutations by single-strand breaks in DNA.¹⁻³

GENERATED FROM INSIDE AND OUT

These unstable, highly reactive molecules (e.g., OH[•], ROO[•]) are generated endogenously as by-products of normal and pathologic metabolic processes and through exposure to ionizing radiation, sunlight, and certain drugs.⁴⁻⁷ They may also enter the body from exogenous sources such as air pollution and cigarette smoke.

THE APPLE AND THE EYE

Oxidative damage — visible as the browning of an apple — is also visible in the eye. Oxidants have been found to damage the lens and retina. The immature retina is especially vulnerable to oxidants.⁷

Free radicals have been implicated in the development of cataracts, as well as atherosclerosis, cancer, emphysema, ischemia-reperfusion injury, Parkinson's disease, rheumatoid arthritis and in the aging process itself.⁷⁻¹⁰

TISSUE DAMAGE HANGS IN THE BALANCE

To minimize the toxicity of free radicals, the cell utilizes a protective antioxidant system of enzymes (superoxide dismutase, catalase, peroxidases), scavengers of these radicals such as glutathione, and essential nutrients (vitamins C, E and beta carotene).¹¹⁻¹³

There is a critical balance between free radical generation and antioxidant defenses.

This critical balance determines the extent of tissue damage.

VITAMINS C, E AND BETA CAROTENE: DIETARY DEFENSES OF THE CELL

In the aqueous phase... Vitamin C neutralizes free radicals, the superoxide radical and singlet oxygen.¹²

In the lipid phase... Vitamin E is capable of breaking the self-propagating chain reaction of lipid peroxidation thus preventing damage to the plasma and organelle membranes.¹¹

Beta carotene, an extremely potent singlet oxygen quencher with unique antioxidant properties, also offers protection in the lipid phase.

A POTENTIAL SAFEGUARD AGAINST CERTAIN DISEASES

While steps should be taken to ensure adequate dietary sources of vitamins C, E and beta carotene, studies are under way to evaluate the efficacy of supplementing the diet with these vitamins as a potential safeguard against certain diseases.

References: 1. Southorn PA. Free radicals in medicine. I. Chemical nature and biologic reactions. *Mayo Clin Proc.* 1988;63:381-389. 2. Marx JL. Oxygen free radicals linked to many diseases. *Science.* 1987;235:529-531. 3. Borish ET, Prior WA. Cigarette smoking, free radicals, and free radical DNA damage. In: Cross CE, moderator. Oxygen radicals and human disease. *Ann Intern Med.* 1987;107:526-545. 4. Harman D. Free radicals: aging and disease. In: Cross CE, moderator. Oxygen radicals and human disease. *Ann Intern Med.* 1987;107:526-545. 5. Lands WEM, Kulmacz RJ, Marshall PJ. Lipid peroxide actions in the regulation of prostaglandin biosynthesis. In: Pryor WA, ed. *Free Radicals in Biology.* London: Academic Press, 1984;39-61. 6. Halliwell B. Oxygen radicals: A commonsense look at their nature and medical importance. *Med Bio.* 1984;62:71-77. 7. Cross CE. The spectrum of diseases. In: Cross CE, moderator. Oxygen radicals and human disease. *Ann Intern Med.* 1987;107:526-545. 8. McCord JM. Oxygen-derived free radicals in postischemic tissue injury. *N Engl J Med.* 1985;312(3):159-163. 9. Pitarys CJ II, Forman MB. Free radicals in reperfusion injury and myocardial stunning. *Cardio.* 1989;6(3):112-125. 10. Blake DR et al. Hypoxic-reperfusion injury in the inflamed human joint. *Lancet.* 1989(Feb 11):289-293. 11. Jenkinson SG. Oxygen toxicity. *J Intensive Care Med.* 1988;3:137-152. 12. Bendich A et al. The antioxidant role of vitamin C. *Adv in Free Radic Biol Med.* 1986;2:419-444. 13. Burton GW, Ingold KU. Beta-carotene: an unusual type of lipid antioxidant. *Science.* 1984;224:569-573.

ANTIOXIDANT PROTECTION VITAMIN C VITAMIN E BETA CAROTENE



NORTHERN LIGHTS: PUBLIC HEALTH SERVICE STYLE



Uptown or off the beaten path, one of our exciting practice opportunities could be just your style.

If you haven't looked at the U.S. Public Health Service lately, you'll be surprised at all that we have to offer.

Whether your rhythm is the fast pace of a large city . . . the easy gait of a small town . . . or the drum beat of a Great Plains Indian Reservation—you can practice the hands-on medicine that you trained for—in a setting that's right for you.

Our physicians practice medicine as it was meant to be, with interesting cases, a minimum of paperwork, and a chance to gain the satisfaction of giving care to those who need it most. With locations nationwide, your options include practicing in hospitals, community health centers, clinics, even small group practices.

Salary and benefits that may surprise you

The Public Health Service offers physicians a competitive salary, paid malpractice coverage, a generous loan repayment program, and a vacation package that gives you time to experience life as well as medicine.

If you're a board-certified or fully residency-trained physician, we may have an opportunity that's just your style.

**CALL TODAY: 1-800-221-9393
In Virginia: 1-703-734-6855**



Advancing the Health of the Nation

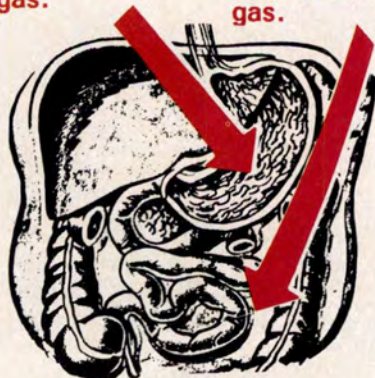
Important news for sufferers of intestinal gas!

A new double-acting anti-gas tablet called **Charcoal Plus** is now available to fight the pain, bloating and diarrhea caused by stomach or intestinal gas. **Charcoal Plus** is double-acting because it fights gas in **both** the stomach and intestines with two recognized anti-gas agents: **Simethicone** (for stomach gas) and **Activated Charcoal** (for intestinal gas). Simethicone is released first in the stomach. Then, after an intermediate coating dissolves, the inner core of activated charcoal is released in the intestines.



SIMETHICONE
for stomach
gas.

**ACTIVATED
CHARCOAL**
for intestinal
gas.



Charcoal Plus is available in bottles of 120 tablets. Each dosage of two tablets contains Activated Charcoal USP (400 mg.) and Simethicone (80 mg.).

Use Coupon For Free Samples!

Complete And Mail Today!

Kramer Laboratories
8778 S.W. 8th St.
Miami, FL 33174

Please send FREE samples and literature on new CHARCOAL PLUS.

Name _____

Address _____

City/State/Zip _____

Telephone _____

For Immediate Action Call
1-800-824-4894
or 305/223-1287

as·sis·tant /-tent / (n):

1) one who assists 2) one who gives supplementary support or aid 3) a newsletter with authoritative coding information from the American Medical Association

CPT Assistant, the AMA's new quarterly newsletter, brings you valuable, up-to-the-minute information on CPT coding and procedures. To keep current on significant coding issues in today's constantly changing health care environment, turn to **CPT Assistant** for regular features such as:

- ▶ **Case Study.** Each quarter, we'll reproduce an operative report or chart, discuss key issues, and identify the relevant Procedure and Diagnosis codes appropriate to this case.
- ▶ **Coding Commentary.** We'll offer a critical explanation of some of the most frequently misinterpreted areas of CPT.
- ▶ **Charts, tables,** and other practical, how-to information to make your coding decisions easier.

A special gift. Order before June 30, 1991 and we'll send you, FREE, a three-ring binder to organize your issues of **CPT Assistant** for easy reference.

A year's subscription to **CPT Assistant** is just \$85 for AMA members, \$135 for non-members.

To order by mail, write to:

Subscription Department NR 000124
American Medical Association
515 North State Street, 11th Floor
Chicago, IL 60610-4377

Or FAX your order to us at: 312-464-5600

To order by phone, call toll-free

1-800-621-8335

Please have your VISA or
MasterCard ready.

NEW!



cpt

Assistant

Authoritative Coding Information from the American Medical Association

**Our premier issue
contains articles
on extremely
important topics:**

- For the first time anywhere,
an insight into the major
changes in CPT for 1991.
- "Coding Commentary"—a
series of essays

We are pleased to introduce "CPT Assistant", the authoritative newsletter on coding from the AMA.

As you know, the AMA maintains and publishes Physicians' Current Procedural Terminology (CPT). The AMA is often called on for interpretations and elaboration of descriptors in CPT. A great deal of time is spent researching these topics and realize that many individuals are interested in this information. Our goal is to provide up to date and timely information on topics of concern to individuals who use CPT.

We hope that the "CPT Assistant" will be a key resource in your efforts to ensure accurate coding.

What is HCPCS?

...ion system for submitting Medicare Part B claims is
... Common Proc-

For
information
on
advertising
your
CME event,
meeting or
conference,
please
call.

312-464-2456

INTERNAL MEDICINE BOARD REVIEW, August 26-30, 1991, at Stanford University School of Medicine. Registration fee: \$400-550. Contact: M. Amin, MSOB #X-365, Stanford Medical Center, Stanford, CA 94305; 415/723-5594.



SUMMER HEALTH POLICY INSTITUTE
A Week-Long Intensive Course on
Developments in National Health Policy

Featuring
Key Washington Health Policymakers
Leading Health Policy Analysts
Nationally Prominent GWU Faculty

Topics Include:
PHYSICIAN AND HOSPITAL PAYMENT
MEDICAL LIABILITY REFORM
HEALTH INSURANCE AND ACCESS TO CARE
FEDERAL BUDGET PROCESS
NATIONAL PRACTITIONER DATA BANK

CME Credit Available

June 24-28, 1991

For more information call or write:
Bradley Pine
Center For Health Policy Research
2136 Pennsylvania Ave., NW
Washington, DC 20052
Phone: (202) 676-5258
FAX: (202) 676-5261

American College of Surgeons

77th ANNUAL CLINICAL CONGRESS

October 20-25, 1991

Chicago



Hundreds of scientific presentations—highlighting research in progress in all surgical specialties—and numerous panels on socioeconomic issues in surgery will be featured during the 1991 Clinical Congress of the American College of Surgeons.

Sessions will include:

- 20 postgraduate courses
- More than 100 medical motion pictures
- 100 hours of general and specialty sessions
- More than 300 research-in-progress papers for the Surgical Forum and papers sessions
- Hundreds of scientific and technical exhibits

The Chicago Hilton and Towers will serve as the headquarters hotel for the meeting; the scientific sessions will take place at McCormick Place, the McCormick Center Hotel, and the Hilton.

Plan now to attend the 77th Annual Clinical Congress. For more information on the meeting and a registration kit, contact Mr. Frank Arado, Dept. CME91, American College of Surgeons, 55 E. Erie St., Chicago, IL 60611. Phone: 312/664-4050.

**1991
International Conference
on Physician Health**

*June 6-8, 1991
Toronto, Ontario, Canada*

**Sponsored by
American Medical Association
Canadian Medical Association
Federation of Medical Licensing
Authorities of Canada**

This year's conference, *Caring for the Caregiver*, will address a range of issues relative to physician health, including aging, physical disabilities, psychiatric disorders, and substance abuse. Through the presentation of scientific data and the provision of training workshops, this conference will offer an overview of the current status of the field as well as educational opportunities for the conference participants.

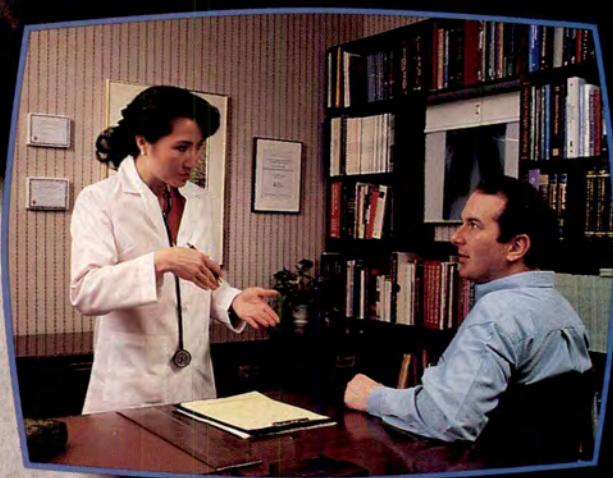
**Please join the AMA, CMA, and
Federation for this exciting and
innovative conference, which:**

- Gives participants an opportunity to hear of the latest developments in this important field
- Provides opportunity to learn skills necessary for conducting research in various areas of physician health
- Examines the differing treatment programs and their relative values
- Offers these important features—
 - State-of-the-art research presentations
 - Invited speakers
 - Selected workshops
 - Pre-conference institutes
 - Extensive networking opportunities
 - Exhibits

For more information regarding registration call **toll-free 1-800-621-8335**. For event sponsorship, or invitation to exhibit call Patrick W. McGuffin, PhD, at 1-312-464-4064.

American Medical Television...

**The Sunday
morning head start**



**to many of
Monday morning's
problem cases.**

10 AM
to NOON

Sunday



AMERICAN
MEDICAL
TELEVISION



Each Sunday morning on

The Discovery Channel

(10:00 am to Noon ET)

American Medical Television

gathers some of the

world's most informed

physicians. Join them for

these programs.



Medical Rounds

A weekly half-hour of news and interviews on fast breaking medical issues. CME accredited.



AMA VideoClinic

A one hour program focusing on the latest developments in medical science and technology and their relationship to patient care. CME accredited.



Practical Medicine/ Milestones in Medicine

The first two Sundays of each month premieres a new half-hour program focusing on major new developments in medicine. CME accredited.



Practical Medicine

The last two Sundays of every month. The half-hour program focuses on socioeconomic issues such as practice management, legal issues, professional-patient relations. CME accredited.

American Medical Television

only on The Discovery Channel (10:00 am to Noon ET)

only through the American Medical Association

only CME programming

For more information call 1-800-933-4AMT.

American Medical Television only on



The AMA Hospital Medical Staff Section Seventeenth Assembly Meeting June 20 - 24, 1991 Chicago Marriott Hotel Chicago, Illinois

Highlights of the Annual Meeting will include:

- an educational program on the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Practice Parameters;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including Evaluation of the Hospital Medical Director and Criteria for Evaluating the Performance of the Hospital Medical Director, PRO Required Education of Hospital Medical Staff and Patient Responsibility of On Call Physicians;
- an information exchange on PRO and Managed Care Review;
- AMA-HMSS Governing Council elections for the positions of Delegate, Alternate Delegate and one Member-At-Large.

For Information Contact:

Department of Hospital Medical Staff Services
American Medical Association
515 North State Street
Chicago, Illinois 60610
Phone (312) 464-4754 or 464-4761



HMSS



Classified Advertising Index

Classification	Page No.
Allergy & Immunology	2609
Anesthesiology	2609
Cardiology	2609
Dermatology	2609
Emergency Medicine	2610
Endocrinology	2610
Family Practice	2610
Gastroenterology	2611
Hematology/Oncology	2611
Internal Medicine	2611
Nephrology	2612
Obstetrics & Gynecology	2612
Occupational Medicine	2613
Ophthalmology	2613
Otolaryngology	2613
Pathology	2613
Pediatrics	2613
Pharmaceutical Medicine	2613
Psychiatry	2613
Radiology	2614
Rheumatology	2614
Surgical Specialties	2614
Orthopedic Surgery	2615
Urology	2615
Multiple Specialties/ Group Practice	2615
Graduate Training/ Residencies Available	2617
Locum Tenens Wanted	2619
Chiefs/Department Heads/ Directors/Faculty	2623
Practices for Sale	2624
For Sale/For Rent/ Real Estate	2624

Policy

Orders for classified advertising must be submitted in writing. Although the American Medical Association believes the classified advertisements in these pages to be from reputable sources, the Association does not investigate the offers made and assumes no liability concerning them. Acceptance of advertising is restricted to employment and practice opportunities, medical equipment for sale and medical office space available. The Association reserves the right to decline, withdraw or edit advertisements at its discretion. Every care is taken to avoid mistakes but responsibility cannot be accepted by the Association for clerical or printer's errors.

Blind Box Service

Blind box numbers are available for all ads at an additional cost of \$20 per issue.

Classified Display Advertising

For information and rates on Classified Display advertising, contact your JAMA Classified Representative at (312)464-2490.

Continuing Medical Education

Call (312)464-2491 for information and rates on the "CME Forum."

Medical Specialty Headings

If the desired heading is not specified when the ad is submitted, we will place it under the most appropriate Medical Specialty Heading.

Responding to JAMA Box Numbers

All replies must be in writing and must cite the box number in the ad. Example: Box xxxx, c/o JAMA, 515 North State Street, Chicago, IL 60610. JAMA is not permitted to divulge the identity of advertisers who wish their mail sent in care of the journal. Box replies are forwarded first class mail only.

Send Orders, Materials and Payment to:

JAMA Classified Advertising
515 North State Street, 12th Floor
Chicago, IL 60610

Fax to: 312-464-2580

Phone: 312-464-2490

Classified Advertising Rates

1991 Word Ad Rates

Regular	4.10 per word, per issue
Bold	4.75 per word, per issue

The minimum charge is for 25 words. A word consists of one or more letters surrounded by two spaces, as in the following examples:

San Francisco	2 words
OB/GYN	1 word
May 9, 1991	3 words
312-555-1212	1 word
G. H. Johnson, M.D.	4 words

Closing Dates

Issue	Closing
June 19	May 27
June 26	June 3
July 3	June 10
July 10	June 17

Allergy & Immunology

ALLERGIST NEEDED BY BUSY MULTISPECIALTY GROUP. First year salary with incentive and corporate fringe benefits. Fine living environment in Midwestern community. Reply: Box 6250, c/o JAMA.

Anesthesiology

READY FOR FREEDOM? IF YOU QUALIFY AS A CompHealth locum tenens physician, you can practice throughout the U.S. for as long or as briefly as you like...on your own schedule...without politics and administrative entanglements. CompHealth, the nation's largest locum tenens group, will provide you with a competitive income, housing, transportation, licensure, and malpractice premiums. For immediate information, call 1-800-354-4050 toll-free.

(800) FAST-GAS: THE NUMBER THAT THOUSANDS OF hospitals and anesthesia professionals call for temporary or permanent anesthesia services (physician and CRNA). Bay Area Anesthesia 800-327-8427.

ANESTHESIOLOGIST (BC/BE) AND CRNA VACANCIES for progressive gen/med/surg teaching VA Medical Center located in beautiful NE Oklahoma. Physician to act as Director of Anesthesia Services. Two CRNAs on staff. All types of general/vascular/non-cardiac and ENT/Urology/Orthopedics are done. Affiliated with Univ of OK Tulsa Medical College, providing training for all levels of surgical residents. Salary/academic appointment dependent upon qualifications. Inquiries to Dr. Harris, Chief of Staff, VAMC Muskogee, OK 74401/call 918-683-3261. EOE.

Cardiology

NONINVASIVE CARDIOLOGIST BC/BE: CENTRAL Florida, noninvasive, three physician group. Pleasant practice atmosphere, state-of-the-art-equipment, attractive compensation with partnership. Contact Administrator 904-589-0207.

BC/BE NONINVASIVE CARDIOLOGIST TO JOIN EXPANDING, well-established multi-specialty clinic in growing Eastern NC community of 50,000. New facilities adjacent to excellent 300-bed hospital with cardiac catheterization lab. Cardiac surgery in community soon. Competitive salary with excellent benefits. Please call Dr. Dan Crocker at 919-443-9084 or send C.V. to Dr. Dan Crocker, 100 Nash Medical Arts Mall, Rocky Mount, NC 27804.

CARDIOLOGISTS WANTED . . . TEXAS: Enjoy a cardiology practice with liberal vacation and guaranteed private-practice level compensation. Sterling Medical, the leading provider of specialty medical services nationwide, is looking for permanent cardiologists for practice locations in Texas. Invasive and non-invasive positions available. As a Sterling Medical physician, you will receive paid malpractice coverage, full holiday/vacation/CME coverage and excellent guaranteed compensation. Call Richard Sheridan toll-free at 1-800-852-5678.

CARDIOLOGY: SEVEN PHYSICIAN CARDIOLOGY GROUP offering immediate opportunity for non-invasive and/or invasive (non-angioplasty) BC/BE Cardiologist(s). The opportunity includes diagnostic catheterization, electrophysiological testing, and full non-invasive lab including nuclear cardiology. First year salary negotiable with full partnership potential thereafter. Reply to: Abilene Cardiology Consultants, P.A., 598 Westwood, Suite 201, Abilene, Texas 79603. 915-673-7373.

NONINVASIVE/INVASIVE CARDIOLOGIST SOUGHT FOR A busy, well established 3-person single specialty group. Purely consultative practice offers state-of-the-art equipment and a full spectrum of cardiology services. Incoming Cardiologist can perform any or all of the following: electrophysiology, nuclear cardiology, TEE, ICU work, diagnostic cardiac cath, or pure clinical noninvasive Cardiology. The setting is south of a Rochester, NY suburb, just 20 miles to the metropolitan area. For more information, send Curriculum Vitae or call: Durham Medical Search, Inc., 6300 Transit Road, P.O. Box 478, Depew, NY 14043. 800-633-7724 National; 800-367-2356 NYS.

Winter Haven, Florida: Non-invasive Cardiologist to join 34-physician, multispecialty group. Community of 30,000 is located 20 minutes from Orlando. Take over \$1.5 million practice. Call/coverage provided. Opportunity is available immediately. Interviewing expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10711, Atlanta, GA 30346, Tel. 1-800-544-1987.

Dermatology

DERMATOLOGIST, BC/BE, WANTED TO JOIN PROGRESSIVE multispecialty group. Attractive salary with incentive-based bonus potential, early full shareholder status. Midwest community offers quality lifestyle, proximity to major city, excellent schools. Reply: Box 6111, c/o JAMA.

DERMATOLOGIST — SOUTH FLORIDA THREE-FOUR days/week. Excellent fee-for-service opportunity in resort area of South Florida. Perfect for active Dermatologist interested in more free time. Call immediately for details. Call Richard Sheridan at 1-800-852-5678.

Emergency Medicine

Texas, Houston and Other Texas Areas: Medical Networks allows you to choose the area to fit your lifestyle. We have opportunities at hospitals in pleasant rural and suburban settings or those located in the prestigious Texas Medical Center. Director and staff positions are available with compensation packages ranging up to \$250,000 plus annually including paid \$1M/\$3M professional liability insurance. Send CV to Medical Networks, Physician Resources Department, P.O. Box 4448, Houston, Tx. 77210; or call 713/446-9696 collect in Texas, 800/231-0223 outside of Texas.

MAINE: ER DIRECTOR FOR BUSY, WELL-EQUIPPED, 21,000 visits per year Emergency Medicine Department in 94-bed, modern, acute care, community hospital. Beautiful, four-season, lake and mountain region close to major ski area. Ninety minutes from Portland. Highly rated schools in lovely, small town. Salary plus full benefit package. Send C.V. to New England Health Search, 63 Forest Avenue, Orono, Maine 04473. Call 207-866-5680.

OHIO, NORTHEAST/CLEVELAND: EMERGENCY DEPARTMENT physicians needed for 20,000 to 40,000 patient volume Emergency Departments in Greater Cleveland area. Physician must be Board Certified in Emergency Medicine, residency-trained in Emergency Medicine, or be Board-Prepared in Emergency Medicine. Salary and benefits package worth \$150K. Full partnership eligibility in two years. Interested individuals, please submit C.V. to: P.O. Box 770551, Lakewood, OH 44107.

EMERGENCY ROOMS AROUND THE COUNTRY NEED YOU. We need top-notch physicians to "hold the fort" in hospitals throughout the U.S. for varying periods of time. We provide excellent earnings opportunities — and take care of travel, housing, licensure, and malpractice premiums for you. You'll be relieved of time-consuming administrative duties and enjoy your choice of schedule and work setting. Call **CompHealth**, the nation's largest locum tenens group, today at 1-800-328-3051 toll-free.

Endocrinology

ENDOCRINOLOGIST: MULTISPECIALTY INTERNAL MEDICINE group in suburban Philadelphia with large office and hospital practice. Some internal medicine required. Reply Box 6790, c/o JAMA.

STAFF POSITION IN CLINICAL NUTRITION AT MAYO CLINIC/MAYO FOUNDATION DEPARTMENT OF MEDICINE DIVISION OF ENDOCRINOLOGY & METABOLISM

Fulltime staff position in clinical nutrition with responsibilities in Nutrition, Lipid and Diabetes Clinics and inpatient Nutrition Support Services. Position is in Division of Endocrinology and Metabolism, a multidisciplinary group of 10 clinical nutritionists. Candidate must be certified in Internal Medicine, certified or eligible for specialty board certification in Endocrinology and Metabolism, and should be certified or eligible for the American Board of Nutrition. Send letter and curriculum vitae to: P. J. Palumbo, M.D., Director, Clinical Nutrition, Mayo Clinic, Rochester, MN 55905. Mayo Foundation is an affirmative action and equal opportunity educator and employer.

Family Practice

NEVADA — THE ELKO REGIONAL MEDICAL CENTER seeks a Board Certified/Board Eligible Family Practitioner to join a multispecialty clinic. Fee for service with excellent collection ratio. Guaranteed salary for six months leading to full partnership. Comprehensive benefit package including malpractice insurance. Elko is a thriving community surrounded by mountains and wilderness areas. Recreation year round. Please send C.V. to Cherie Atwood, Administrator, Elko Regional Medical Center, 762 14th Street, Elko, Nevada 89801, 702-738-3111.

Family Practice Faculty

Natividad Medical Center, located near the beautiful Monterey Peninsula in California, is seeking a BC/BE Family Practitioner to fill a vacant faculty position. NMC is a 211-bed, JCAHO accredited teaching hospital (UCSF Family Practice Residency Program) with full ancillary services.

Responsibilities will include oversight of the Family Practice Center, teaching and directing patient care. Successful candidate will have clinical and/or academic experience beyond residency. Administrative experience is desirable. Excellent compensation package with paid malpractice and health and welfare benefits. Send C.V.'s to:

Stephanie Clymer
Associate Personnel Analyst
Natividad Medical Center
1330 Natividad Road
P.O. Box 81611
Salinas, CA 93912-1611
AA/EOE



FAMILY PRACTICE — EXCELLENT OPPORTUNITY FOR A BC/BQ Family Practitioner to join a ten-member well-established primary care group and assume large practice of retiring physician. Competitive salary, paid malpractice, growing patient population, excellent schools, university, and outdoor family activities in this scenic upstate New York community. Send C.V. to: D. Precipio, 33 Mitchell Avenue, Suite 204, Binghamton, NY 13903. 607-723-3346.

DON'T ALLOW MALPRACTICE COSTS TO DISCOURAGE you from practice! If you qualify as a CompHealth locum tenens, you can leave your malpractice worries behind. We'll pay your malpractice premiums, licensure, housing and transportation costs and provide you with an excellent income. You select practices, from Maine to Alaska, for as long or as briefly as you like...a week, a month, a year or more. You'll also find yourself relieved of time-consuming administrative duties. Call CompHealth, the nation's largest locum tenens group, today: 1-800-328-3051 toll-free.

BC/BE FAMILY PRACTITIONER WANTED TO WORK AS A private practitioner, yet be part of a primary care group in Glendale, CA, 20 minutes North of downtown, L.A. Send C.V. to E. Kaufman, 1420 S. Central Ave., Glendale, CA 91204; 818-502-2371.

MEMPHIS, TN: SSG SEEKS FAMILY PRACTITIONERS FOR extremely busy practice. Competitive salary, benefits + interviewing and relocation expenses. One-year to partnership. Growing SE metropolitan area. Contact Jeff Hartline, 5000 Linbar Drive, Suite-240, Nashville, TN 37211. 800-283-6611.

FAMILY PRACTICE. ALASKA AREA NATIVE HEALTH SERVICE. Professionally rewarding, challenging, cross-cultural medicine. Medical school loan repayment to 25K/year plus salary. Indian Health Service. Equal Opportunity Employer. 907-257-1457 collect.

FAMILY PRACTICE: LAKOTA, WINNEBAGO, CHIPPEWA, Mandan, Arikara, Hidatsa, Omaha, Sac and Fox. The Aberdeen Area Indian Health Service. Professionally rewarding, challenging, cross-cultural medicine. Medical school loan repayment to 25K/yr plus salary. Equal Opportunity Employer. 605-226-7531 collect.

VIRGINIA: A unique FP opportunity to choose the practice situation you desire. Solo or partnership opportunities available in the Norfolk/Virginia Beach area. Location is on the Virginia coast and has a population of one million. Abundant shopping, entertainment, and beach activities. Net income guarantee. Interviewing and relocation expenses paid. Please send CV or call **Doug Henderson, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10431, Atlanta, GA 30346, Tel. 1-800-544-1987.**

Progressive, 106-bed healthcare facility seeking BC/BE Family Practice physician. Take over solo clinic practice with coverage from a large FP group. Hospital is well-equipped and is affiliated with the Carilion Health System. Beautiful Southern Virginia community of 10,000 is located about one hour from Roanoke, Virginia, Winston-Salem, North Carolina, and the Tri-Cities of Tennessee. Enjoy the beauty of the Blue Ridge Mountains, friendly people, good schools, beautiful homes, a growing economy, and an aggressive Chamber of Commerce dedicated to an ever-increasing quality lifestyle. Exceptional net income guarantee including paid malpractice, and interviewing and relocation expenses. Send CV or call Greg Poston, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10683, Atlanta, GA 30346, Tel. 1-800-544-1987.

FAMILY HEALTH CARE PHYSICIANS-SAUDI ARABIA: Resource Sciences Arabia, Ltd., a U.S. managed firm, requires Family Health Care Physicians with E.R. experience for primary care/family clinics in Saudi Arabia. We offer an attractive, highly competitive compensation package including free housing, transportation, medical malpractice insurance, annual vacation, R&R leave, and liberal continuing education allowances. Current U.S. tax laws exempt the first \$70,000 of foreign earned income from tax for qualifying individuals. Please send complete resume with copies of all pertinent licenses to Dept. 91-23: Holmes & Narver Services, Inc., 999 Town & Country Rd., Orange, CA 92668. Equal Opportunity Employer.

FAMILY PRACTICE BC/BE TO JOIN 60-MEMBER MULTI-specialty group in beautiful southern Wisconsin. Opportunities exist for urgent care without night call or hospitalization and full practice with or without obstetrics. Excellent salary and benefits. Send C.V. to Dr. Stan Gruhn, Riverview Clinic, 580 N. Washington St., Janesville, WI 53545.

NAPLES, FLORIDA: BC/BE FAMILY PHYSICIAN TO JOIN progressive family practice center. The most desirable family and recreational area in the U.S.A. Excellent salary/ownership option. Send C.V. Florida Family Care, William Leach, M.D., 1545 C.R. 951, Naples, Florida 33999. 813-455-4104.

Tampa, Florida — Family Practice — Opportunity for Family Physician to join FP, in partnership, in Plant City, Florida, a community of 25,000, which is 20 minutes from Tampa. Hospital has 120 beds. Above average salary plus benefits and malpractice. Interviewing and relocation expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10708, Atlanta, GA 30346, Tel. 1-800-544-1987.

RETIRING PHYSICIAN: GROWING SOUTHEASTERN COMMUNITY located in the foothills of Cumberland and Lookout Mountain seeks General/Family Practitioner. Community features sailing, water skiing, kayaking, golf, state parks and its own snow ski resort. Many national softball tournaments are hosted here annually. Local schools have received national recognition for their advanced curriculum. Hospital will provide turn-key practice set-up in fully equipped office with no buy-in. Strong, stable economy and low unemployment. Financial package includes guaranteed six figure income, relocation and interviewing costs. For complete information, send your C.V. to Tom Hart, of Harris Kovacs Alderman, 4170 Ashford-Dunwoody Road, Suite 500, Atlanta, GA 30319, or call 800-347-7987, ext. #9-0095.

SEEKING FULL-TIME OR PART-TIME FAMILY PRACTITIONER for busy practice in Northern Virginia, Alexandria area. Excellent opportunity. Candidates must be Certified or Eligible for certification by the American Board of Family Practice. Please respond with C.V. to Box 6772, c/o JAMA.

FAMILY PRACTICE — HAWAII: EXCELLENT OPPORTUNITY & lifestyle. A multispecialty group, servicing West Maui. Call or send C.V. to Business Manager, Garden Island Medical Group, P.O. Box 669, Waimea, HI 96796. Phone 808-338-1645.

EXCELLENT GROUP OPPORTUNITY AVAILABLE FOR BC/BE Family Physicians in expanding, well-established, multispecialty clinic. New facilities adjacent to excellent 300-bed hospital in growing Eastern NC community of 50,000. Competitive salary with excellent benefits. Call Dr. Dan Crocker, 100 Nash Medical Arts Mall, Rocky Mount, NC 27804.

FAMILY PRACTICE NORTHWEST TEXAS. \$120,000.00 guarantee. Free clinic space. Fully equipped and staffed 20-bed hospital. Community very supportive of medical personnel. Excellent schools and an ideal place to raise a family. Contact John B. Martin, Administrator, Knox County Hospital, Box 608, Knox City, Texas 79529. 817-658-3535. After hours 915-773-5097.

FAMILY PRACTITIONERS WANTED: TEXAS AND TENNESSEE

Sterling Medical, the nation's leading provider of general and specialty medical services on a departmental basis, has several extremely attractive opportunities available for Family Practitioners (GMOs) at Sterling Medical staffed hospitals in the South, West and Midwestern states. As a Sterling Medical physician, you'll receive truly excellent net compensation, vacation/holiday leave, limited or no on-call and full malpractice coverage. For information, call John Adams toll-free at 1-800-852-5678.

ASSISTANT/ASSOCIATE PROFESSOR OF FAMILY MEDICINE

Bartlesville Family Medicine Center, Department of Family Practice, University of Oklahoma College of Medicine - Tulsa, is seeking faculty members at the Assistant/Associate Professor level for a rejuvenated university-affiliated, community-based program associated with a 300 bed community hospital. This is a 1-2 program with a total of 12 residents. Academic appointment as Assistant/Associate Professor based on experience.

Candidates for this position must have an M.D. degree from a recognized medical school and be Board Certified in Family Practice with private practice experience. Administration and teaching experience desirable but not required. Must be eligible for licensure in Oklahoma. Salary is based on experience with a full range of benefits.

This position is located in Northeastern Oklahoma's "Green Country", 45 miles north of Tulsa. With a population of 35,000, Bartlesville has multiple outdoor water recreational activities, excellent schools, a superb retirement community and is the Corporate headquarters of Phillips Petroleum Company.

Interested applicants please send resume and questions to: T.L. Johannesen, M.D., 3500 S.E. Frank Phillips Blvd., Bartlesville, Oklahoma 74006, or Jon Calvert, M.D., Ph.D., Chair, Department of Family Medicine, University of Oklahoma College of Medicine - Tulsa, 2808 S. Sheridan Road, Tulsa, Oklahoma 74129.

An Equal Opportunity Employer

JANE PHILLIPS
OPENING MEMORIAL
MEDICAL CENTER
WHERE CARING MAKES THE DIFFERENCE

PHYSICIAN WANTED: FAMILY PRACTICE PHYSICIAN TO join 17-physician, multi-specialty group with attached 40-bed hospital located in southern Idaho. Contact: Business Administrator, Box 1233, Twin Falls, ID 83301.

PRIMARY CARE PHYSICIAN WANTED FOR EXPANDING Eastern Washington Clinic. Full and part-time positions available. Located in prime recreational area. Skiing, sailing, fishing, hunting all within short distance. Enjoy mild climate, excellent schools and a major university branch campus in growing community of 100,000 plus. Challenging work in a superbly equipped clinic with state of the art lab, x-ray, laser and endoscopy. Above average compensation and benefits including malpractice, health insurance, and CME. Contact Dr. Stephen L. Smith, 310 Torbett, Richland, WA 99352. 509-545-8340 or Fax 509-545-1136.

SOUTHCENTRAL JCAHO MISSOURI HOSPITAL IN CON-junction with metropolitan hospital located 90 miles away, has outstanding opportunity for BC/BE Family Practitioner. Single specialty group offers excellent guarantee, retirement, profit sharing, disability & health insurance, 3 weeks vacation, CME, 1/2 call and free housing. This progressive community has a junior college, airfield, excellent schools. Mountains and lakes provide many outdoor activities. Bly/Grove Associates, 1374 Clarkson/Clayton Center, Ballwin, Missouri 63011; 1-800-888-2266; fax 314-458-9168.

BE/BC FAMILY PRACTITIONER NEEDED FOR ASSOCIATE position with partnership possibilities. Competitive salary with complete benefits. Located minutes from metro area in North Carolina. For more information, send Curriculum Vitae or call: Durham Medical Search, Inc., 6300 Transit Road, P.O. Box 478, Depew, NY 14043. 800-633-7724 National; 800-367-2356 NYS.

MIDWEST. EXCITING NEW FAMILY PRACTICE OPPORTU-nity located near large metropolitan area. Incoming physi-cians will have lucrative income guarantee, marketing assis-tance, cross-coverage and support of the community. Conveniently located in recreational area with close prox-imity to a large midwest city. Small town atmosphere permits community involvement, cultural activities and large AAA rated school system. Search conducted by: Physician International, 4-J/FPW Vermont Street, Buffalo, NY 14213, 1-800-622-4062.

PENNSYLVANIA. EXCELLENT FAMILY PRACTICE OPPOR-tunity to assume a busy existing practice or join an existing group, both with good coverage. They are conveniently located within a one-half hour drive of a metropolitan area and major medical schools. This area has an excellent economy and both opportunities are affiliated and supported by a full service hospital. Search conducted by: Physician International, 4-J/FPW Vermont Street, Buffalo, NY 14213, 1-800-622-4062.

FAMILY PRACTICE, DEWITT, IOWA: (20 MILES NORTH OF Davenport, Iowa). BC/BE F.P. needed to take over a practice on June 1, 1992. Well established practice. Guaranteed salary. Jim Ragland, Administrator, DeWitt Community Hos-pital, 1118 11th Street, DeWitt, Iowa 52742; 319-659-3241.

KANSAS CITY

Family/General Practice physician to join two physi-cians. 1 in 3 call/coverage. No Obstetrics. Salary plus bonus, malpractice insurance, and full benefits. Send CV or call Neal Steinhoff, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10464, At-lanta, GA 30346, Tel. 1-800-544-1987.

FAMILY PRACTICE OR GP, OB OPTIONAL, MEDICAL AND surgical group in northcentral Indiana. Urban area close to big cities. Salary to \$100,000 first year, malpractice and health insurance provided. Paid 2 weeks vacation after six months. Partnership after 2nd year. Incentive bonus in 2nd year. Work 4 days a week. On call every 4th night and 4th weekend. Contact A. Das, M.D., 401 E. Reynolds Drive Kokomo, IN 46901; 317-453-0802.

FLORIDA, VENICE, FULL OR PART-TIME POSITION FOR BC/BE Family Physician or Emergency Physician. Paid malpractice and vacation. Florida license required. Salary commensurate with experience. Resume to P.O. Box 537, Venice, FL 34284.

FAMILY PRACTICE: LA CLINICA DE LA RAZA, A NON-profit organization in the San Francisco Bay Area seeks physician to fill part-time vacancy (20 hrs/wk). Requirements include current license to practice medicine in the State of California, BC/BE in Family Practice, current DEA registra-tion, plus 2 years working in a primary care clinic setting with emphasis in adolescent health care. Bilingual English/Spanish or Cantonese preferred. Fee-for-service for all inpatient care. Malpractice insurance provided, excellent fringe benefits. Send C.V. to: Patricia Roybal, Personnel Manager, La Clinica de la Raza, 1515 Fruitvale Ave., Oakland, CA 94601, or call: 415-534-0078, Ext. 230.

MAUI, HAWAII: FAMILY PHYSICIAN NEEDED FOR SMALL clinic. Excellent opportunity for good income and free time for golf, windsurfing, or sailing. Send C.V. to: John N. Withers, M.D., Kihei Physicians, P.O. Box 1119, Kihei, Maui, Hawaii 96753, or call 808-877-6655.

Gastroenterology

BC/BE GASTROENTEROLOGIST WITH 3 YEARS TRAIN-ing including hepatology for position in University academic center. Primary clinical responsibilities, experience in biliary endoscopy diagnostic and therapeutic. Send C.V. to Univer-sity of Miami School of Medicine, D-49, P.O. Box 016790, Miami, Florida 33101. EO/AA Employer.

GASTROENTEROLOGIST BC/BE FOR CHICAGO AND SUB-urban multi-hospital practice. Competitive salary and ben-efits. Must be trained in all GI procedures. Send C.V. to Box 6579, c/o JAMA.

Hematology & Oncology

MIDDLE TENNESSEE: EXCELLENT PRACTICE OPTION for BE/BC Hematologist/Oncologist in university community of 175,000+. Recently completed Cancer Center attached to hospital needs Director for expanding program. Private practice package extremely competitive with reimbursed interviewing and relocation costs. Radiation Oncologist in place and ready for aggressive colleague. Historic commu-nity with proximity to Nashville. Contact Jeff Hartline, 5000 Linbar Drive, Suite-240, Nashville, TN 37211, 800-283-6611.

Oncologist — Laurel, Mississippi — Join 4-phys-ician group of 2 Internists, a Pulmonologist, and a Gastroenterologist. 1 in 5 call/coverage. Search sponsored by 275-bed hospital. Community of 30,000 just 90 minutes from Gulf Coast and 60 minutes from Jackson, Mississippi. Excellent fi-nancial package. Paid interviewing and relocation expenses. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10705, Atlanta, GA 30346, Tel. 1-800-544-1987.

SENIOR HEMATOLOGIST. THE DIVISION OF HEMATO-log-y at Cook County Hospital is seeking a Board Certified Hematologist to head the Section of Inherited Hematologic Disorders. The divisional activities include general clinical hematology, care for patients with hemoglobinopathies, hemophilia center, laboratory hematology, clinical research and residency training in medicine as well as hematology. For further information contact: Ashok R. Patel, M.D., Chairman, Division of Hematology, Cook County Hospital, 627 South Wood Street, Room 807, Chicago, Illinois 60612. Phone: 312-633-7218. Equal Opportunity Employer.

Opportunity for Oncologist in Valdosta, Georgia. Com-munity of 50,000 is located on Florida/Georgia border. Solo opportunity with coverage. Join Radiation Thera-pist in 12,000-square-foot cancer center at 288-bed hospital. Excellent financial package. Interviewing and relocation expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10693, Atlanta, GA 30346, Tel. 1-800-544-1987.

VACANCY EXISTS FOR A BOARD CERTIFIED/BOARD ELI-gible Medical Oncologist or Board Certified/Board Eligible Hematologist/Medical Oncologist for our medical center. This center is a 425-bed GM&S hospital (includes ICU/RCU) with an 86-bed NHCU, 344-bed domiciliary, 4-bed dialysis unit, 60-bed psychiatry unit, and an expanding ambulatory care (outpatient) section. Medical center is located in a progressive community of 25,000 with southern hospitality, excellent schools, recreation, community events, and suburban living and is located two and one-half hours from mountains and beaches. Special pay for geographic location available. English language proficiency is required for all direct patient care positions. This medical center is a smoke-free facility with designated smoking shelters. Contact A.C. Pradhan, M.D., Chief, Medical Service, Carl Vinson VA Medical Center, Dublin, GA 31021 at 912-272-1210, extension 289 or 307. Equal Opportunity Employer.

Internal Medicine

FLORIDA — TAMPA BAY AREA, CENTRAL AND COASTAL. Excellent opportunities for internists. Complete confi-dentiality. Contact Frank Lane, M.D., Medical Director, P.O. Box 272509, Tampa, FL 33688 or call 1-800-433-6726.

PEORIA, IL: PROCTOR COMMUNITY HOSPITAL HAS practice opportunities for BC/BE Internists. Income guar-antees and excellent benefits. Call or write: Timothy Walton, Director of Physician Resources, Proctor Professional Build-ing, Suite #20, 5401 N. Knoxville, Peoria, IL 61614. 309-691-1043 or 1-800-332-3436, ext. 1043.

MEDICINE HOUSE PHYSICIANS NEEDED FOR NORTH-east Ohio suburban hospitals. \$97-120K, paid malprac-tice, never on call. Physician Staffing, Inc., 3628 Walnut Hills, Cleveland, Ohio 44122. 216-292-7445.

INTERNSHIP. COLMERY-ONEIL VA MEDICAL CENTER IS actively recruiting for a Board Certified or Board Eligible Internist with a subspecialty in hematology/oncology. This is a large medical center with an active residency program and medical students. There is a complete CME program available and opportunity to take time off to attend medical meetings, seminars, etc. There are many fringe benefits in the Federal government which includes 30 days paid vacation, 15 days sick leave, 10 federal holidays, low cost health and life insurance and retirement plan which includes tax-deferred options. Topeka is the capital city of Kansas and offers residents a quality environment. Interested can-didates should contact the Chief of Medical Service, (111) Veterans Administration Medical Center, 2200 Gage, To-peka, Kansas 66622, or phone 913-272-3111, ext. 315. Equal Opportunity Employer.

INTERNIST BC/BE TO JOIN MULTISPECIALTY GROUP practice in Midwest. Subspecialty desirable but not neces-sary. Excellent opportunity with competitive salary and fringe benefits leading to early shareholder status. Fine living and work environment. Reply to Box 6107, c/o JAMA.

MEMPHIS, TN: SSG SEEKS TWO INTERNISTS FOR EX-tremely busy practice. Competitive salary, benefits + inter-viewing and relocation expenses. One year to partnership. Growing SE metropolitan area. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

EAST TENNESSEE: BUSY INTERNIST SEEKS ASSOCIATE in community at the foot of the Smokies. Excellent financial package plus paid interviewing and relocation expenses. Convenient coverage situation. Beautiful area with all out-door activities available plus one hour to Knoxville and skiing. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

GENERAL INTERNIST BC/BE TO JOIN 60-MEMBER MULTI-specialty group in beautiful southern Wisconsin. Great lifestyle and practice opportunity with or without night call and hospitalization. Excellent salary and benefits leading to full partnership in one year. Send C.V. to Dr. Stan Gruhn, Riverview Clinic, 580 N. Washington St., Janesville, WI 53545.

MACON, GA — CHARTER NORTHSIDE HOSPITAL, A REL-atively new, fully equipped, 103-bed acute general hospital, has immediate private practice opportunities for BC/BE Internists or Family Practitioners in this beautiful city of 150,000. Abundant outdoor recreation, excellent public and private schools, and cultural amenities combined with an outstanding practice offers an unsurpassed quality of life. Financial package includes income guarantee, relocation assistance and more. For complete details, send your Curriculum Vitae to Administration, Charter Northside Hos-pital, P.O. Box 4627, Macon, GA 31210, or call 912-477-9520 today.

GULF COAST

Excellent four-physician *Internal Medicine* group in Mobile, Alabama seeks fifth IM to replace recently retired physician. Well-established pa-tient base, excellent reputation, and call rotation of 1 in 5. 250-bed community hospital has state-of-the-art facilities. Mobile is a community of 250,000 which offers Gulf Coast living, nice hous-ing, plenty of shopping, and good schools in an environment where outdoor activities are always available. Excellent financial package with first-year salary of over \$90,000 and productivity thereafter. All benefits, including six-week vaca-tion, and paid interviewing and relocation ex-penses. Send CV or call Doug Henderson, Jack-son and Coker, Inc., 115 Perimeter Center Place, Suite 380 10680, Atlanta, GA 30346, Tel. 1-800-544-1987.

OVER 400 PRACTICE OPPORTUNITIES NATIONWIDE

If you're thinking of relocating your practice, Jackson and Coker's network of seven regional offices can help you find the opportunity that fits your needs.

We receive information on new practice opportunities every day, and we're making good news travel fast.

Following is a sample of the outstanding Internal Medicine opportunities currently available.

NORTH DAKOTA: BC/BE General Internist to associate with long-standing, seven-physician multispecialty group. Group serves population of 40,000 located in upper Midwest. Community has excellent public and private schools, as well as a four-year state university. Financial package includes first-year salary of \$90,000 with incentive compensation and complete benefits. Send your CV or call RON COATS.

MASSACHUSETTS: Join ground floor of new IM group being formed in the beautiful suburbs of Western Boston. Hospital has over 300 beds and affiliations with major teaching hospitals. Enjoy the excitement and challenge of a growing practice with an excellent case mix, the security of a strong financial package, and the attractions of one of America's most beautiful and cosmopolitan cities in the hub of New England. Send your CV or call DAVID CORNETT.

FLORIDA/GEORGIA: Board Certified/Board Eligible Internist to join busy practice in South Georgia community hospital. Proximity to both Florida coast lines and Tallahassee. CME/vacation, staff support, excellent income guarantee, and interviewing and relocation expenses provided. To inquire about site visit, send your CV or call BRAD PETERS.

TEXAS: Internist to join progressive, 150-bed East Texas hospital. Be fifth IM on staff. Present staff cannot keep up with patient demand and have requested another IM. Share call equally. Hospital completely equipped with 8-bed centrally monitored ICU/CCU, MRI, and CT Scanner. Cath lab and Radiation Therapy being developed. Quality lifestyle is "second to none." Fine schools, including a four-year university, and many cultural and recreational amenities simply enhance this tremendous opportunity. Exceptional financial package includes guaranteed income to ensure financial success. Send your CV or call MARK HANNA.



JACKSON
AND COKER

For complete details at no cost to you,
call:

1-800-544-1987 EXT. 17

115 Perimeter Center Place
Suite 380 JFD1
Atlanta, GA 30346

TEST THE WATERS. IF YOU ARE A PHYSICIAN OF EXCEL-
lent caliber and don't want to settle into one practice until
you've examined all your options, consider joining Comp-
Health as a locum tenens physician. You'll have the chance
to practice from the Atlantic to the Pacific. You also set your
own schedule and the duration of your assignments. What's
more, you'll earn an excellent income and we'll take care of
your malpractice premiums and major expenses. Immediate
openings available. Call now at 1-800-328-3061 toll-free.

ATLANTA: BC/BE INTERNISTS TO JOIN MULTISPECIALTY
group. With/without specialty. Great on-call; only two nights
a month. Half-day off each week. Immediate benefits.
Guaranteed salary. Partnership in two years. Liberal vacation/
CME time. Contact: B.J. Dawson, Southeastern Health
Services, P.O. Box 724147, Atlanta, Georgia 30339.

INTERNIST WITH/WITHOUT SUBSPECIALTY, TO JOIN EX-
cellent and congenial group in Atlanta. BC/BE. Guaranteed
salary leads to partnership in two years. Box 6767, c/o
JAMA.

DEPARTMENT OF VETERANS AFFAIRS. INTERNAL MED-
icine: Immediate opening for BC/BE primary care internal
medicine or family practice physician in VA Outpatient Clinic.
No in-patient responsibility or after hours call schedule
(8am-4:30pm). Competitive salary and fringe benefits in
medium size midwestern city with many cultural opportu-
nities. Write or call Dan Boatright, Clinic Director, 411 Dr.
Martin Luther King Jr. Drive, Peoria, IL 61605. 309-671-
7359.

INTERNIST/FAMILY PRACTITIONER BC/BE CHILLICOTHE,
Ohio is a 45-minute drive South of Columbus, Ohio and
possesses opportunities for cultural, recreational, and lei-
sure activities. Excellent salary and federal benefits. Please
send inquiries and Curriculum Vitae to William Haskins,
M.D., Acting Chief of Staff, VA Medical Center, 12723 State
Route 104, Chillicothe, OH 45601. 614-773-1141, ext. 7254.
EOE.

RAPIDLY GROWING PRACTICE OF 9 INTERNISTS NEEDS
several BC/BE Internists. Excellent benefits and guarantee
with partnership potential. Practice is associated with 405
bed M/S facility in Mid-west community of 750,000+.
Growing economy, diverse cultural and recreational activi-
ties. Superior educational systems. Bly/Grove Associates,
1374 Clarkson/Clayton Center, Ballwin, Missouri 63011;
800-888-2266; FAX 314-458-9168.

INTERNAL MEDICINE: WISCONSIN-THE MANITOWIC
Clinic seeks a BC/BE General Internist to join eight
other internists in a busy 19 physician multispecialty
group. Lovely community of 35,000 located mid-state
on the shore of Lake Michigan. Guaranteed first year
salary and excellent benefit package. Contact or send
C.V. to: James Robinson, Administrator, Manitowic
Clinic, 601 Reed Avenue, Manitowic, WI 54221-1270.
Telephone 414-682-8841.

INTERNIST, BOARD CERTIFIED/ELIGIBLE, FOR FULL-
time faculty position/appointment with major Midwes-
tern university affiliated 220-bed hospital educational
program. Teaching and patient care responsibilities.
Competitive salary with attractive fringe benefits. Call/
write Dennis Walter, M.D., Medical Director, Broadlawn
Medical Center, 18th & Hickman, Des Moines, Iowa
50314. Phone 515-282-2319. Equal Opportunity Em-
ployer.

BC/BE INTERNIST: NW PHILADELPHIA (ROXBOROUGH/
Andorra) needed to join BC Internist. P.T., F.T. Affiliated
with medical school hospital. Some teaching. Ideal situation
for person looking for entry into private practice. Call Ms.
Brennan at 215-521-5100. EOE/AAE.

FRANKFORT, KENTUCKY: EXCEPTIONAL OPPORTUNITY
for partnership with well-established, busy physician in office
next to 190-bed hospital. Competitive salary, all insurances,
benefits, and opportunity to practice broad spectrum of IM.
Frankfort is the capital of Kentucky, ideally located between
Louisville and Lexington. Send C.V. to Jamie Dooley, Quo-
rum Health Resources, 2515 Park Plaza, Nashville, TN
37203; or call 1-800-233-1470.

GENERAL INTERNIST: UNIQUE OPPORTUNITY IN GROW-
ing Orlando. Board Certified/Eligible. Good salary/benefits
with early partnership. Florida Physician Placement Service:
phone 407-876-0607; fax 407-876-3876. P.O. Box 16672,
Orlando, Florida 32861.

NORTH CAROLINA COAST: SEEKING BC/BE GENERAL
Internist to join solo practitioner in small historic town by the
water. Progressive, financially sound, JCAHO accredited
hospital. Send C.V. or call: John Rider, Assistant Administra-
tor, Chowan Hospital, P.O. Box 629, Edenton, NC 27932;
919-482-6270

WANTED: GENERAL INTERNIST. IMMEDIATE OPENING
for BC/BE physician who enjoys busy hospital practice.
Salary and benefits are competitive. Responses to Box
6787, c/o JAMA.

INTERNAL MEDICINE: 3-PERSON INTERNAL MED GROUP
seeking BC/BE associate to join well established practice in
Central Adirondack Region of NY State. Attractive compen-
sation package including guaranteed salary. Send C.V. to
Adirondack Internal Medicine Group PC, RFD 410D, Sara-
nac Lake, NY 12983.

CENTRAL NEW JERSEY, INTERNIST WITH OR WITHOUT
subspecialty to share busy medical practice with one inter-
nist. Salary offered. Aesthetic high growth area. Close to
hospitals. Box 6789, c/o JAMA.

MAUI, HAWAII: INTERNIST NEEDED FOR SMALL CLINIC.
Excellent opportunity for good income and free time for golf,
windsurfing, or sailing. Send C.V. to: John N. Withers, M.D.,
Kihei Physicians, P.O. Box 1119, Kihei, Maui, Hawaii 96753,
or call 808-877-6655.

ORANGE PARK, FL (JACKSONVILLE SUBURB) — A
group of four internists wishes to replace a member who is
leaving to devote more time to family. The group has been
and continues to grow, therefore, the new member will be
busy immediately. You can choose to share overhead and
have your own practice or become a salaried member of
the group. Excellent opportunity to take over an established
practice as the retiring physician will turn all patients over to
the new internist. For more information, send your C.V. to:
Paul Coogan, Professional Relations, Humana, Inc., Dept.
A-0515A, P.O. Box 1438, Louisville, KY 40201-1438. Or call
toll-free 1-800-626-1590.

FULL-TIME INTERNIST FOR A COMMUNITY HEALTH CEN-
ter in Hartford, Conn. Excellent benefits/relocation. Call Dr.
Reddy 203-236-0857.

Nephrology

NEPHROLOGIST — UNIQUE OPPORTUNITY FOR BC/BE
Nephrologist or B/C Internist with interest in critical care and
nephrology to join an expanding group of Nephrologists and
Internists in private practice in Marquette, Michigan. Mar-
quette General Hospital, the Regional Referral Center for
the Upper Peninsula's 320,000 residents, operates an acute
and chronic Hemodialysis Department. A family practice
residency program and medical students from Michigan
State University's College of Human Medicine, offers teach-
ing opportunities. Financial incentives are available. Please
send C.V. to Robert J. Raica, Marquette General Hospital,
420 West Magnetic Street, Marquette, MI 49855.

THE DEPARTMENT OF INTERNAL MEDICINE IS SEEKING
an academic nephrologist, at the Assistant Professor level,
with an interest in teaching, clinical nephrology and research
to join the Division of Nephrology and Hypertension at the
University of South Florida College of Medicine. The candi-
date should be certified by the American Board of Internal
Medicine and qualified or certified by the Subspecialty
Board of Nephrology. Application recruiting deadline date is
June 20, 1991. Send Curriculum Vitae to: German Ramirez,
M.D., Acting Director, Division of Nephrology and Hyperten-
sion, 13000 Bruce B. Downs Boulevard, Tampa, FL 33612-
4745. The University of South Florida is an Affirmative
Action/Equal Opportunity Employer.

Obstetrics & Gynecology

OBSTETRICIAN-GYNECOLOGIST: THE PERMANENTE
Medical Group, Inc., of San Jose, California is looking for
BC/BE physicians for immediate openings in the OB/GYN
department. Positions available either at the main facility in
San Jose, or at satellite medical offices in Gilroy. The young,
dynamic department is still growing and currently has 17
physicians and two nurse practitioners. Our outstanding
benefits package includes full coverage malpractice insur-
ance. San Jose and Gilroy share excellent access to Bay
Area cultural and recreational activities. Recent salary
advances allow extremely competitive compensation start-
ing with the first year of employment. For more information,
please contact: Jerome L. Nehemiah, M.D., Chief, Depart-
ment of OB/GYN, The Permanente Medical Group, Inc.,
260 International Circle, AD-JAMA, San Jose, CA 95119,
or call collect 408-972-6180. EOE.

OB/GYN HOUSE PHYSICIANS NEEDED FOR NORTHEAST
Ohio suburban hospitals. \$100-150K, paid malpractice,
never on call. Physician Staffing, Inc., 3628 Walnut Hills,
Cleveland, Ohio 44122. 216-292-7445.

OVERLIN, OH MULTISPECIALTY GROUP SEEKS BC/BE
Obstetrician/Gynecologist for growing patient load. North-
ern Ohio college town serving drawing area of 275,000.
Salary, liberal benefits first year with full shareholder status
available thereafter. Send your C.V. to Dr. VanDyke, 224 W.
Lorain, Oberlin, OH 44074.

SEATTLE, WASHINGTON. OB/GYN FOR GROWING PA-
tient load. Adjacent to community hospital with neonatal
coverage. Seek individual with high moral and ethical
character to join team of three physicians. Close to skiing,
water and cultural events. Substantial benefit package with
generous CME and vacation time. Send C.V. to: Brenda
Weeda, South Seattle Women's Clinic, 16122 SW 8th, Suite
E-5, Seattle, WA 98166.

SEEKING BOARD CERTIFIED/BOARD ELIGIBLE OB/GYN
to join an active 4-physician practice. Excellent opportunity.
Located in Northern Virginia suburbs of Washington, D.C.
Relocation assistance available. Please respond with C.V.
to Box 6769, c/o JAMA.

BC-E OB/GYN: CENTRAL FLORIDA. EXCELLENT FULL
time opportunity. Competitive salary. Position available in 8
person department. Liability coverage provided. Florida
license required. Close to beaches, university center and
Disney. For information call collect 813-534-3300 or write
Personnel Director, Polk General Hospital, P.O. Box 816,
Bartow, FL 33830. EOE.

WISCONSIN

Third Board Certified/Board Eligible Obstetrician-Gy-
necologist to join financially strong, progressive, staff-
model HMO. Community of 130,000 with a university
located near Minneapolis-St. Paul. Excellent quality
lifestyle and outstanding recreational area. \$145,000
salary, malpractice insurance, and full benefits. Send
CV or call Neal Steinhoff, Jackson and Coker, Inc.,
115 Perimeter Center Place, Suite 380 10467, At-
lanta, GA 30346, Tel. 1-800-544-1987.

OB/GYN — NORTH CAROLINA: Located less than one hour from Raleigh-Durham area. Only an hour from North Carolina beaches. Hospital just completed new OB/GYN unit. Solo with coverage. Your choice to set up your own practice with a net guarantee from the hospital or become an employee of the hospital. All interviewing and relocation expenses paid. Send CV or call Doug Henderson, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10677, Atlanta, GA 30346, Tel. 1-800-544-1987.

MAUI, HAWAII: OB/GYN PHYSICIAN NEEDED FOR SMALL clinic. Excellent opportunity for good income and free time for golf, windsurfing, or sailing. Send C.V. to: John N. Withers, M.D., Khei Physicians, P.O. Box 1119, Khei, Maui, Hawaii 96753, or call 808-877-6655.

OB/GYN — HAWAII: EXCELLENT OPPORTUNITY & LIFE-style. A multi-specialty group, servicing West Kauai. Call or send resume to Business Manager, Garden Island Medical Group, P.O. Box 669, Waimea, HI 96796. Phone 808-338-1645.

GYNECOLOGIST — INDIANAPOLIS, INDIANA TWO-three days/week. Excellent fee-for-service opportunity including surgical and non-surgical gynecological procedures. No OB. High net compensation with overhead and expenses paid. Call immediately for details. Call Richard Sheridan at 1-800-852-5678.

OBSTETRICS / GYNCOLOGY — LAUREL, MISSISSIPPI: Join current Obstetrician in association. 1 in 2 call/coverage. Search sponsored by 275-bed hospital. Community of 30,000 just 90 minutes from Gulf Coast and 60 minutes from Jackson, Mississippi. Excellent financial package. Paid interviewing and relocation expenses. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10703, Atlanta, GA 30346, Tel. 1-800-544-1987.

FLORIDA — SEVERAL OB/GYN PRACTICE OPPORTUNITIES available. Communities in Panhandle, Central, East and West Coast. Guarantees and full package of benefits. For more information, please call or send your C.V. to Dee Dee Ralston, HealthTrust, Inc., 4525 Harding Road, Nashville, TN 37205, 1-800-825-3463. We are not an agency or HMO.

OB/GYN: SOLO OPPORTUNITY, WITH COVERAGE, AVAILABLE in growing rural community in Georgia. Because of over 825 deliveries in the service area, the two OB/GYNs have a difficult time meeting the demand for both Obstetrics and Gynecology. Central location near beaches, metropolitan areas and Georgia mountains. Licensed 150-bed full-service facility. Hospital offers excellent incentive package. Send C.V. to: Beverly Luke, Coffee Regional Hospital, P.O. Box 1248, Douglas, GA 31533-1248; 1-800-873-7065.

NORTH CAROLINA COAST: SEEKING BC/BE OB/GYN TO join established 2-person practice in small, historic town by the water. Progressive, financially sound, JCAHO accredited hospital. Send C.V. or call: John Rider, Assistant Administrator, Chowan Hospital, P.O. Box 629, Edenton, NC 27932; 919-482-6270.

CALIFORNIA: SECOND BC/BE OB/GYN TO JOIN FINAN-cially strong multispecialty group practice in Southern California, near downtown Los Angeles. Salary to \$200K, malpractice and benefits. Send C.V. to Medical Director, ACMG, 2675 East Slauson Avenue, Huntington Park, CA 90255.

OB/GYN, NE — LIVE OUT WHAT OTHERS CAN ONLY dream of. Work only 4 days per week in an existing practice with no overhead and no administrative headaches to worry about. Never pay malpractice again while you practice in a medium-sized hospital that just spent \$8M on renovation. Can you see yourself in a Norman Rockwell setting, a land of clean, crisp air and wholesome American values? The hospital will pay all your expenses to come visit this Connecticut River community in the mountains of Vermont, with buildings from the 1800's, cross-country skiing, and Dartmouth only 25 minutes away. Remember, I've been there and can verify all of the above. Please call me at 800-347-6987, ext. #0-0120 and I'll tell you all you want to know about the area; or send your C.V. to Joe Bishop, Harris Kovacs Alderman, 4170 Ashford Dunwoody Road, Suite 500, Atlanta, GA 30319.

Occupational Medicine

A PRIVATE COMPANY PROVIDING HEALTH PROMOTION and Occupational Medicine Services is seeking to expand its Occupational Medicine Program and has a position available for a BC/BE Occupational Medicine Physician or an Internal Medicine Physician with appropriate experience. Unique opportunity and excellent potential for growth. Please send C.V. to Steven M. Moffatt, M.D., 17 West Market Street, Suite 1000, Indianapolis, IN 46204-2932.

Ophthalmology

ARE THERE PROFESSIONAL SETTINGS YOU'VE ALWAYS wanted to sample? Consider joining CompHealth, the nation's largest locum tenens group. If you qualify, you can practice from Florida to Alaska...for a week to several years or anything in between...it's your choice. You'll enjoy the experience of a lifetime. CompHealth provides competitive earnings and takes care of the malpractice premiums and major expenses like housing and transportation. What's more, you'll spend less time on paperwork and more time on quality health care. Openings available now, call 1-800-354-4050 toll-free.

Otolaryngology

ASSOCIATE NEEDED. OPPORTUNITY IN NORTHEAST Ohio for association in a practice of Otolaryngology, with an emphasis on head/neck reconstructive and plastic surgery. Opportunity exists to take over the practice in 2-3 years. The practice location is growing and offers a mix of urban and rural lifestyles. Call: 216-296-4044.

OTOLARYNGOLOGIST NEEDED — TENNESSEE: STERLING MEDICAL, the nation's leading provider of general and specialty medical services on a departmental basis, has an extremely attractive opportunity available for an Otolaryngologist at a Sterling Medical staffed hospital in Tennessee. As a Sterling Medical physician, you'll receive high fee-for-service compensation with generous hourly guarantee, limited or no on-call, vacation/holiday leave, and full malpractice coverage. For information, call Jon Adams at 1-800-852-5678.

Pathology

LSU SCHOOL OF MEDICINE, NEW ORLEANS, IS SEEKING AP/CP Board Certified Pathologist to practice in 200-bed LSU affiliated hospital in Baton Rouge, LA. Academic appointment at the Assistant Professor level. Some years of experience preferred but not mandatory. Salary competitive, depending on qualifications and experience. Send letters of application, Curriculum Vitae, and names of three references to Alfredo Suarez, M.D., Director of Clinical Laboratories, Earl K. Long Memorial Hospital, 5825 Airline Highway, Baton Rouge, LA 70805. LSUMC is an Equal Employment Opportunity/Affirmative Action Employer.

FORENSIC PATHOLOGIST: FOR POSITION OF MEDICAL Examiner in Corpus Christi, Texas; send resume to: Nueces County Medical Examiner's Office, 2435 Morgan, Corpus Christi, TX 78405.

Pediatrics

PEDIATRICIAN: MULTI-SPECIALTY CLINIC IN ELKO, NE-vada is looking for a BC/BE Pediatrician to join two other Pediatricians in a busy practice. All fee for service with good collection ratio. Guaranteed salary for six months leading to full partnership. Comprehensive benefit package including malpractice insurance. Elko is a thriving community surrounded by mountains and wilderness. Recreation year round. Please send C.V. to Cherie Atwood, Administrator, Elko Regional Medical Center, 762-14th Street, Elko, Nevada 89801. 702-738-3111.

EAST COAST: GROUP/SOLO/PARTNERSHIP POSITIONS. Guaranteed incomes, shared call, etc. Contact Fox-Morris Assoc., 47 Perimeter Center East, Suite 540, Atlanta, GA 30346 or 800-899-0933.

VERELAN®
Verapamil HCl 120mg
240mg
PELLET-FILLED CAPSULES

A CHANCE TO FOCUS ON WHAT'S IMPORTANT. If you're a physician who qualifies as a CompHealth locum tenens physician, you can leave onerous paperwork and overhead costs behind. With CompHealth you'll enjoy practice in different locations throughout the U.S. for variable lengths of time. Earn an excellent income in a variety of practice settings. CompHealth takes care of all of the major expenses like malpractice premiums, housing, and transportation. You'll find yourself free of administrative duties, with more time to take care of the patients who need you. Call today: 1-800-328-3073 toll-free.

MIDDLE TENNESSEE: TWO PEDIATRICIANS NEEDED IM-mediately for university community of 35,000 in Cumberland Mountains. 225-bed JCAHO approved hospital. Partnership, group, or solo options available. Abundant outdoor activities and one hour to metro area. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

IMMEDIATE OPENING FOR A PEDIATRICIAN TO JOIN another in private practice in Northwest Indiana. Send resume to P.O. Box 10575, Merrillville, IN 46411.

ARKANSAS: WELL ESTABLISHED PEDIATRIC GROUP seeks 4th member in scenic community of 60,000. Located 40 miles south of Little Rock, AR. Affiliation with 400-bed regional medical center. Competitive financial package offered. Send C.V. to Andrew Johns, Physician Services of America, Suite 250, 2000 Warrington Way, Louisville, KY 40222, or call 1-800-626-1857.

MIDDLE TENNESSEE: PRESTIGIOUS SIX PERSON group in university community of 35,000 seeks two additional Pediatricians for busy practice. Competitive package with paid interviewing and relocation expenses. Beautiful hospital with over 1200 annual births. Historic community with proximity to Nashville. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

LONG ISLAND, NEW YORK — Pediatrician to join group of four Board Certified physicians in Holbrook, New York. Community of 60,000 is located one hour from New York City. Group practices at SUNY-Stonybrook. Interviewing and relocation expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10696, Atlanta, GA 30346, Tel. 1-800-544-1987.

Pharmaceutical Medicine

NATION-WIDE PHARMACEUTICAL CLIENTS SEEK MDS for clinical research/professional services. Needed: IM Sub-specialties, Pharmacology, CNS, etc. Dr. Juliano, BRJ Associates, 615 Sherwood Pkwy, Mountainside, NJ 07092, 201-233-6000.

Psychiatry

MIDDLE TENNESSEE: EXCELLENT PRACTICE OPTION for BE/BC Psychiatrist in university community of 75,000+. Dedicated in-patient unit with all support services. Private practice package extremely competitive with reimbursed interviewing and relocation costs. Local Psychiatrist anxious to provide coverage and possible association. Historic community with proximity to Nashville. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

CLINICAL DIRECTOR — IMMEDIATE OPENING FOR A Board Certified Psychiatrist to restructure health care team. Two additional openings for Board Qualified Psychiatrists, with private practice potential and a university teaching appointment if desired, in the stable, progressive community of Hastings, NE. Generous retirement and health benefits, CME/professional expenses, competitive salary and housing are all part of the package. To learn more about this outstanding professional opportunity, contact Nancy Stallings, CompHealth, 4021 South 700 East, Salt Lake City, UT 84107, 1-800-328-3035.

CENTRAL CALIFORNIA. INTERDISCIPLINARY MENTAL health group seeks child Psychiatrist to join group. Premier Psychiatric group offers lucrative guaranteed first year salary, extraordinary benefits package, and shareholder opportunity. Excellent inpatient facility. Bedroom community for Bay area conveniently near Sierra Mountains, Lake Tahoe and Monterey. One of the fastest growing cities in California offers a growing economy, cultural activities and an affordable real estate market. Search conducted by: Physician International, 4-J/Py Vermont Street, Buffalo, NY 14213. 1-800-622-4062.

Research works.

American Heart
Association



CHIEF PSYCHIATRIST

Natividad Medical Center, located on the beautiful Monterey Peninsula in California, is seeking a Chief Psychiatrist. NMC is a 211-bed, JCAHO accredited teaching hospital (UCSF Family Practice Residency Program) with full ancillary services.

Contracted position with excellent compensation package and paid malpractice. Send C.V.'s to:

Stephanie Clymer
Associate Personnel Analyst
Natividad Medical Center
1330 Natividad Road
P.O. Box 81611
Salinas, CA 93912-1611
AA/EOE



Radiology

RADIOLOGIST — NUCLEAR/GENERAL — NEEDED FOR South Jersey hospital practice. BC or in process. \$175-\$200K + base salary plus excellent benefit package. Also need qualified locum tenens for immediate coverage. Send C.V. in confidence to Box 6732, c/o JAMA.

WHY DID YOU GO INTO RADIOLOGY IN THE FIRST place? Have you had enough politics, paperwork and pressure? If you'd like more time to focus on quality health care, consider practicing with CompHealth, the nation's largest locum tenens group. If you qualify, you'll determine the setting: From Maine to Hawaii — and the duration — from a week to a year or more. We relieve you of the time-consuming administrative duties, provide a competitive income, and take care of housing, transportation, licensure and malpractice premiums. Call now: 1-800-328-3084 toll-free.

WEST TENNESSEE: FIVE PERSON GROUP SEEKS SIXTH person for busy practice. All modalities in state-of-the-art facilities. Excellent salary and benefits + interviewing and relocation expenses. National School of Excellence. Low unemployment. Proximity to Memphis. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

MIDDLE TENNESSEE: BUSY THREE PERSON GROUP looking for fourth Radiologist. All modalities. Excellent first year package plus early partnership. Reimbursed interviewing and relocation expenses. Bustling community near Nashville with excellent schools and housing. Contact Jeff Hartline, 5000 Linbar Drive, Suite 240, Nashville, TN 37211, 800-283-6611.

RADIOLOGIST — INTERVENTIONAL — NEEDED FOR South Jersey hospital practice. BC or in process. \$175-\$200K + base salary plus excellent benefit package. Also need qualified locum tenens for immediate coverage. Send C.V. in confidence to Box 6758, c/o JAMA.

SCHOOLCRAFT MEMORIAL HOSPITAL IN MICHIGAN'S beautiful Upper Peninsula seeks a person with strong training and/or experience in all areas except MRI. Should be Board Certified and demonstrate skills in diagnosis, fluoroscopy, U.S., mammography and CT. The radiology department at Schoolcraft Memorial Hospital was recently renovated and has a new x-ray machine and mammographic unit, gamma camera and services of a mobile CT scanner. Please direct your C.V. and all correspondence to: David B. Jahn, Administrator, Schoolcraft Memorial Hospital, 500 Main St., Manistique, MI 49854. Call collect: 906-341-2163.

IMMEDIATE POSITION AVAILABLE FOR A RADIOLOGIST in a free-standing outpatient MRI/CT imaging center in Central New Jersey. Send C.V. to Box 6788, c/o JAMA.

RADIOLOGISTS WANTED: EL PASO, TEXAS; WASHINGTON, D.C.

Enjoy a radiology practice with limited on-call, liberal leave time and guaranteed private-practice level compensation. Sterling Medical, the leading provider of specialty medical services nationwide, is looking for permanent radiologists for practice locations in the West, and Eastern Seaboard. As a Sterling Medical physician, you will be guaranteed paid malpractice, full holiday/vacation/CME coverage and very good compensation. Call Steve Bernard toll-free at 1-800-852-5678.

IMMEDIATE OPENING BOARD CERTIFIED RADIOLOGIST. Imaging fellowship, angiography and general radiology. Attractive salary/benefits; partnership. South Suburban Chicago, 220-bed hospital. John M. Nayden, M.D., 708-799-8000, ext. 3276.

Rheumatology

RHEUMATOLOGIST — BISMARCK, NORTH DAKOTA. Associate/partner needed for group practice. Send C.V. to Box 6761, c/o JAMA.

RHEUMATOLOGIST TO JOIN ESTABLISHED GROUP IN Bismark, North Dakota which provides services to 300,000 area residents. Send C.V. to: Box 6785, c/o JAMA.

Surgical Specialties

SURGICAL HOUSE PHYSICIANS NEEDED FOR NORTH-east Ohio suburban hospitals. \$95-104K, paid malpractice, never on call. Physician Staffing, Inc., 3628 Walnut Hills, Cleveland, Ohio 44122. 216-292-7445.

VASCULAR SURGEON: FELLOWSHIP TRAINED, WANTED to join solo practitioner in the Finger Lakes region of Upstate New York. Great opportunity, competitive salary and early partnership. Reply immediately. Box 6709, c/o JAMA.

General Surgery opportunity in Princeton, Kentucky. One hour from Nashville, Tennessee, Evansville, Indiana, and Paducah, Kentucky. Community of 10,000 is looking for solo General Surgeon with coverage. Located on Kentucky Lake and Lake Barkley. 50-bed hospital recently completed \$2 million renovation adding three OR suites. Excellent income guarantee. Interviewing and relocation expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10691, Atlanta, GA 30346, Tel. 1-800-544-1987.

CHIEF, DIVISION OF PERIPHERAL VASCULAR SURGERY: The Department of Surgery, Medical College of Ohio is seeking a Board Certified or Board Eligible Surgeon to lead its Division of Peripheral Vascular Surgery. Responsibilities will include patient care, research and education of undergraduate and graduate students. Curriculum Vitae and bibliography should be submitted to Neil R. Thomford, M.D., Chairman, Department of Surgery, P.O. Box 10008, Toledo, OH 43699-0008. The Medical College of Ohio is an Equal Opportunity Employer.

DIRECTOR, CARDIAC TRANSPLANT PROGRAM: THE DE-partment of Surgery, Medical College of Ohio is seeking a Board Certified or Board Eligible Cardiothoracic Surgeon to direct established heart transplant program. Curriculum Vitae and bibliography should be submitted to Neil R. Thomford, M.D., Chairman, Department of Surgery, P.O. Box 10008, Toledo, OH 43699-0008. The Medical College of Ohio is an Equal Opportunity Employer.

PARTNERSHIP — General Surgeon to join successful Vascular Surgeon in scenic Tennessee city of 30,000. Some vascular experience required. 80% of practice will be GS cases. Fabulous office adjacent to modern 275-bed hospital. Unsurpassed, quality lifestyle with quick access to Nashville. Send CV or call Ken Cunningham, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10686, Atlanta, GA 30346, Tel. 1-800-544-1987.

BC/BE GENERAL SURGEON WITH VASCULAR FELLOWSHIP to join busy NYC practice. Excellent salary and benefits with potential for partnership. Send C.V. and references to P.O. Box 58, Purchase, NY 10577.

WANTED: SURGICAL SPECIALTIES. IMMEDIATE OPPOR-tunity for BC/BE General Surgeon with interest in vascular surgery for family oriented group practice. Located near Chicago, IL. We have an attractive practice with three BC General Surgeons and four BC Family Practitioners. Excellent compensation and benefit package with potential for partnership. Submit C.V. to: Family Medical Group, 330 Madison, Joliet, IL 60435, Attn: J. Walsh.

BE/BC PHYSICIAN TO JOIN WELL-ESTABLISHED GEN-eral E.N.T. group (2 person). Partnership after first year. No buy-in required. Houston area. Send C.V. to Box 6554, c/o JAMA.

THORACIC-CARDIOVASCULAR SURGERY: BC/BE THO-racic Surgeon. New grads are welcome. Pennsylvania license required. Competitive salary and benefits. Send C.V. to Box 6776, c/o JAMA.

WANTED: GENERAL SURGEON (BC/BE) TO JOIN BUSY General Surgeon in Finger Lakes region of upstate New York. Send C.V. to Box 6779, c/o JAMA.

BC/BE NEUROSURGEON

needed to join an existing solo neurosurgery practitioner on the staff of a progressive, 462-bed hospital in Gastonia, North Carolina, a growing community of 50,000 situated 17 miles west of Charlotte. This need has arisen due to the continuing growth in demand for neurological care in the community. This effort is fully supported by our medical staff. As a result, you can expect a high level of professional cooperation. Our incumbent Neurosurgeon is prepared to offer the necessary financial incentives to ensure a successful start-up and will pay interviewing and relocation expenses.

Please respond with CV to: Box 6734, c/o JAMA

VETERANS AFFAIRS MEDICAL CENTER, SAGINAW, MICH-igan, needs BC or BE Surgeon with or without subspecialty. Call Joyce Shappes, Personnel Service, 517-793-2340, extension 3076. An Equal Opportunity Employer.

BC/BE VASCULAR SURGEON TO JOIN ESTABLISHED surgical group practice. Office provides a full-time RVT in the vascular lab. Eastern PA location. Will introduce. Send C.V. to Box 6782, c/o JAMA.

ROCKY MOUNTAINS SOUTHERN COLORADO GENERAL SURGERY

Colorful Colorado, mountains, lakes, forests, full time ANS and RAD. Tremendous need, excellent income guarantee and potential. For more information on this opportunity call Gerry Weipert or Roger Hamilton at (800) 876-0500 or (214) 444-2200 or send your CV to Merritt, Hawkins & Associates, 222 W. Las Colinas Blvd., Suite 1920, Irving, TX 75039. Please reference 808.

SURGEON: FIVE SURGEONS WITH A WELL ESTABLISHED group practice in beautiful Central Pennsylvania are seeking a sixth general, oncologic, or colorectal surgeon. Excellent starting salary, early partnership, and plenty of vacation time available. Excellent medical community with all medical/surgical subspecialties available. Please send C.V. to Timothy J. Pagana, M.D., FACS, 699 Rural Avenue, Williamsport, PA 17701.

MIDDLE TENNESSEE — GENERAL SURGERY. CLINIC located on beautiful Center Hill Lake is looking to add an additional physician. Practice will be fully managed. For more information contact: Dee Dee Ralston, 1-800-825-3463, HealthTrust, Inc., 4525 Harding Road, Nashville, TN. We are not an agency or HMO.

BC/BE General Surgeon with thoracic and/or vascular interests to join well-established four-person practice. City of 50,000 has well-rounded medical community and is the home of Cornell University. Outstanding cultural, scenic and recreational resources. Send CV to: Surgical Associates of Ithaca, P.C., 1301 Trumansburg Rd., Ithaca, NY 14850.

TRANSPLANT SURGEON — BC/BE TO JOIN AN EXPAND-ing Midwest transplant program based at a University affiliated tertiary referral center. Renal and extra-renal transplant background necessary including short and long term immunosuppressive management. Pancreas transplant experience desirable. Excellent lifestyle, competitive salary and benefits. Resident and student teaching and clinical research opportunities. Please send Curriculum Vitae to: Marcia Cordell, Vice President, Physician Recruiting, Research Health Services System, 2316 E. Meyer Blvd., Kansas City, MO 64132.

BUSY GENERAL SURGEON IN CONNECTICUT SEEKING BC/BE General Surgeon for immediate opening as associate. Office adjacent to 300-bed teaching hospital, 2 hours from Boston and New York. Excellent salary and benefits. Send C.V. to Dr. A. Sarma, 40 Hart Street, New Britain, Connecticut 06052. 203-225-9431.

MISSISSIPPI — Associate with established sur-geon or go solo and share call coverage. Sunbelt city of 11,000 has 102-bed hospital with recent \$10 million expansion. State-of-the-art facility is utilized by a staff of six OB/G's, 4 FP's, 3 IM's and 3 PD's, and a Radiologist certified for VS support. Enjoy a huge practice and a quality lifestyle with the full support of the medical staff and administration. Outstanding income guarantee. Send CV or call Ken Cunningham, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10688, Atlanta, GA 30346, Tel. 1-800-544-1987.

Orthopedic Surgery

Orthopedic Surgeon to join two-physician practice in Mobile, Alabama. Busy General ORS group in community of 250,000 on the Gulf Coast. Practice has a good reputation, hospital's support, and excellent facilities. Easy access to several pleasant beaches, nice cultural amenities, and good restaurants make this a better-than-average coastal community. Competitive financial package with all benefits includes interviewing and relocation expenses. Send CV or call Doug Henderson, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10682, Atlanta, GA 30346, Tel. 1-800-544-1987.

ORTHOPEDIC SURGEON: PROGRESSIVE, 150-BED Regional hospital located in growing area of south Georgia has great need for Orthopedic Surgeon. The hospital performed over 2800 surgeries and over 18,000 ER visits during 1990. Orthopedic cases were referred out-of-town. The 28-physician medical staff will welcome you, and the hospital will assist you in establishing your practice. Build this fine practice while enjoying a quality lifestyle in the South. Send C.V. or call: Beverly Luke, Coffee Regional Hospital, P.O. Box 1248, Douglas, GA 31533-1248; 1-800-873-7065.

NE (ORS) — NO BUY-IN, TAKE OVER EXISTING PRACTICE at 181 bed, state-of-the-art facility that offers 24-hour M.D. anesthesia, full-time radiology, fixed CT and mobile MRI. Very competitive net income guarantee, along with 1/2 call coverage. The community is surrounded by 3 snow skiing resorts and located within 30 minutes of all the amenities if the metropolitan city. You will find yourself with plenty of free time because of the rotating call to play golf or enjoy boating on one of the area's many lakes. Remember, the community will pay all your overhead and moving expenses. I've been to this community and met the covering doctors; believe me, there is a strong need. Please call me at 800-347-6987, ext. #1-051, or send your C.V. to Joe Bishop, Harris Kovacs Alderman, 4170 Ashford Dunwoody Road, Suite 500, Atlanta, GA 30319.

Griffin, Georgia — Join four-physician group based in Atlanta. Practice in satellite office located 40 miles south of Atlanta in Griffin. Population of 30,000. 160-bed hospital. Excellent salary. Interviewing and relocation expenses paid. Send CV or call Greg Pilgrim, Jackson and Coker, Inc., 115 Perimeter Center Place, Suite 380 10700, Atlanta, GA 30346, Tel. 1-800-544-1987.

Urology

UROLOGIST NEEDED — GEORGIA, TEXAS: STERLING MEDICAL, the nation's leading provider of specialty medical services on a departmental basis, has positions immediately available in Urology for practice locations in Georgia and Texas. Truly excellent net compensation with paid malpractice, and vacation/CME/holiday leave. For immediate information, call Richard Blatt, toll-free at 1-800-852-5678.

BC/BE Urologist

needed to join the staff of a 10-man multi-specialty group located 40 miles from Birmingham, Alabama. Our practice offers the advantages of built-in referrals and an income distribution plan that does not penalize high-volume producers. We are prepared to offer the necessary financial incentives to ensure a successful start-up and will pay interviewing and relocation expenses.

Respond with CV to: box 6783 c/o JAMA

Multiple Specialties/ Group Practice

OCCUPATIONAL/FAMILY PRACTICE MEDICINE. THE West Coast's leading outpatient medical provider has opportunities for Primary Care Physicians to join an expanding 150 person medical group. Full/part-time openings in the San Francisco Bay Area and throughout California and Seattle-Tacoma, Washington. Attractive package includes excellent base salary plus incentive program, malpractice insurance, comprehensive benefits, 401(k) plan, vacation/sick/holiday/CME. Contact Marilyn Burke, ReadCare/CHC, 446 Oakmead Parkway, Sunnyvale, California 94086, 408-737-8531.

JAMA, May 15, 1991—Vol 265, No. 19

NATION WIDE
Excellent opportunities available
Solo, group or hospital based
ALL SPECIALTIES

send cv:

MARVEL MEDICAL RECRUITERS
 3690 Orange Place #260
Beachwood, OH 44122
800-338-1257 216-292-2855

PHYSICIANS: ALL SPECIALTIES. RECRUITING FOR CLINICS & hospitals throughout Midwest. Send C.V. to Physician Placement, 310 E. Water St., Medina, ND 58467. 701-486-3222.

POSITION AVAILABLE: BC/BE INTERNIST OR FAMILY Practice with established multi-specialty group. Excellent benefit package including insurance and guarantee. If interested, send C.V. to: Leroy W. Kitch, Administrator, Skinner Clinic, 124 Dallas St., San Antonio, Texas 78205.

PRIVATE PRACTICE OPPORTUNITIES
In all specialties, TX & Sunbelt states
Call 1-800-284-4560/Houston 785-3722

Or send CV to:
11140 Westheimer
Suite #144
Houston, TX 77042

Reuben
Bronstein
& Associates

PENNSYLVANIA, CENTRAL: STABLE EMERGENCY Physician group seeking BC/BP physician in primary care specialty for full time opportunity beginning June 1, 1991. Double coverage. Competitive salary. Excellent benefits. Send C.V. to Dr. Robin Wilkening, Chief, Department of Emergency Medicine, Lewistown Hospital, Lewistown, PA 17044 or call 717-242-7179.

TEXAS DEPARTMENT OF CORRECTIONS — SEEKING full-time Physicians (\$63,470 to \$84,180) and Psychiatrists (\$81,900 to \$129,300) in Correctional Health Care Facilities. Must be Texas licensed, Board Eligible. Excellent benefits. Inquiries to: TDC, PO Box 99, Personnel Annex, Huntsville, TX 77342. 409-294-2755.

BEST NATIONWIDE OPPORTUNITIES

In All Specialties
Permanent Placement and Locum Tenens
If Your Serious About Your Future, WE NEED YOUR C.V.

CONSOLIDATED PHYSICIAN RELOCATION SERVICES
One San Jose Place, #17
Jacksonville, FL 32257
1-800-733-7999

"WE LISTEN TO YOUR NEEDS"

TEXAS: FULL-SERVICE HOSPITAL ONE HOUR NORTH OF Dallas has immediate need for Family Practitioners/Internists/Orthopod. Excellent 1st year package, 3 beautiful office buildings available now. Reply: Northeast Medical Center, 903-583-8585, (ex.314), P.O. Drawer C, Bonham, Texas 75418.

SPINAL CORD INJURY VACANCY EXISTS FOR STAFF Physician BE/BC in Psychiatry, Internal Medicine or Family Practice in this active GM&S Medical Center affiliated with the Medical College of Georgia. Spinal Cord Injury Service consists of a 60-bed acute Rehabilitation Care and Treatment Unit. Augusta enjoys a moderate climate, reasonable cost of living, numerous recreational facilities and institutions of higher learning. Augusta is known as the Garden City of the South and home of the Masters golf tournament. An Equal Opportunity Employer. Interested applicants send Curriculum Vitae to Dr. Vidya C. Sridharan, Chief, Spinal Cord Injury Service, VA Medical Center, Augusta, GA 30910 or call 404-823-2216

PRIMARY CARE PHYSICIAN NEEDED FOR GROUP WITH three other physicians. Competitive salary with full range of benefits included. Located in North Carolina 15 minutes from suburban area and classified as State and Federal loan repayment area. For more information, send Curriculum Vitae to: Durham Medical Search, Inc., 6300 Transit Road, P.O. Box 478, Dewey, NY 14043. 800-633-7724 National; 800-367-2356 NYS.

UP TO
\$2,500
SIGN ON BONUS

Southeastern openings — All specialties Immediate needs for GP/FP, OB/GYN, Occupational Medicine, Anesthesiology, Internal Medicine, Orthopedic, Pathologist and Radiologist.

MEDICAL
RECRUITERS
of ATLANTA, Inc.

Suite 170, 1800 Water Place, Atlanta, GA 30339
1 800 523-1351

Interested in a better practice opportunity?

A simple phone call will put you in touch with the widest range of opportunities in any specialty.

All opportunities have been thoroughly researched and we can provide you with information on:

- Service Area
- Facilities
- Income
- Lifestyle
- Homes
- Geography
- Recreation
- Schools

We have 12 years of experience making relocations easy and successful for physicians. That's why we're the largest physician search firm in the nation. For information on current opportunities, call:

1-800-544-1987 EXT. 16



JACKSON
AND COKER
115 Perimeter Center Place,
Suite 380 JD1
Atlanta, Georgia 30346

NASHVILLE HEALTHCARE GROUP

The Nashville HealthCare Group has excellent immediate and future opportunities for BC/BE Family Physicians, Internists, and Pediatricians, with a newly formed primary care practice affiliated with one of the nation's largest health plans. The Nashville HealthCare Group offers a practice setting which is conducive to the development of individual talents and style in a pre-paid environment.

The Nashville HealthCare Group provides a guaranteed salary and a comprehensive benefits package which includes health, dental, life, and short and long-term disability and malpractice insurances, licensing fees, and bonus program. Physicians will be eligible for ownership in the practice.

The Nashville Metropolitan Area offers a strong economy, four seasons, exceptional educational institutions, diverse cultural activities and many avenues for professional and personal growth.

Please forward curriculum vitae and letter of interest to:

D. Mark Mahler, M.D.,
The Nashville HealthCare Group
227 French Landing Drive
Suite 300
Nashville, TN 37228

or call 1-800-626-7131.

CAREER PRACTICE OPPORTUNITIES

**We know one thing very well !
Our national network of clients define exactly what
their needs are. Are you that thoroughly prepared?**

- *Your C.V. does not define what you want. Confidential discussion with our professional consultants concerning specific opportunities will bring about that definition.*
- *Our goal is to connect you and your family with positions that foster long term commitments. We are dedicated to finding the right match between your career objectives, personal goals, and the criteria of our clients.*
- *We care. Our success can not be separated from your success.*

**If you are seeking a career opportunity you should
know one thing very well -- Cejka & Company.**

START THE PROCESS



Mail CV to:
Cejka & Company
222 S. Central
Corporate Offices, Suite 400
St. Louis, MO 63105

Fax in CV to: 314-726-0026
Or call: Karen Williams
800-365-2237

- INTERNAL MEDICINE
- ORTHOPEDIC SURGERY
- OBSTETRICS/GYNECOLOGY
- INFECTIOUS DISEASE/INTERNAL MEDICINE
- FAMILY PRACTICE
- INVASIVE CARDIOLOGY
- NON-INVASIVE CARDIOLOGY
- RHEUMATOLOGY

The **Humana-Michael Reese HMO**, a large well-established HMO serving its members in 21 Health Centers throughout the Chicago Metro area, is seeking additional Board Certified/Eligible physicians in the above specialties.

Physicians with the Humana-Michael Reese HMO enjoy a full practice with modern facilities and equipment as well as opportunities for teaching.

A highly-competitive salary and excellent benefits complement a rewarding practice and lifestyle.

Interested applicants should address inquiries to:

Alfred Kendrick, M.D.
Medical Affairs
HUMANA-MICHAEL REESE HMO
2545 King Drive, Chicago 60616
or call (312) 808-4551

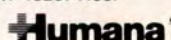
Humana-Michael Reese HMO
an equal opportunity employer m/f/h

Humana has the right locations.

Group, associate and solo opportunities are available in a variety of settings. Here are a few to pick from:

Alabama Cardiologist FP/IM OB/GYN Orthopedic Surgeon Otolaryngologist	Louisiana Family Physician OB/GYN Orthopedic Surgeon
Phoenix, AZ Family Physician OB/GYN Orthopedic Surgeon	Kansas City, MO Family Physician OB/GYN Orthopedic Surgeon
Denver, CO Internist Neurologist	Natchez, MS OB/GYN Oncologist
Central Florida Cardiologist OB/GYN Orthopedic Surgeon	Chattanooga, TN Orthopedic Surgeon Perinatologist
Jacksonville, FL GYN (no OB) Internist	Beaumont, TX Anesth (OB) Family Physician Orthopedic Surgeon
South Florida OB/GYN Pediatrician	College Station, TX Neonatologist Rheumatologist
Dodge City, KS Neurologist Orthopedic Surgeon Pediatrician	Dallas, TX Cardiologist (INV) Diabetologist
Louisville, KY FP/IM OB/GYN Radiologist	San Antonio, TX Family Physician Internist OB/GYN
	Layton, UT Internist OB/GYN

Call TOLL-FREE 1-800-626-1590, or send your curriculum vitae to: Manager, Professional Relations, Humana Inc., Dept. A-0515, P.O. Box 1438, Louisville, KY 40201-1438.



HOW TO FIND DR. RIGHT?



**PHYSICIANS
CAREER
RESOURCE**

The AMA Physicians Career Resource is a multidimensional recruiting service that offers access to physicians registered with Physicians Placement Service, listings in one of the country's most respected placement journals, and advertising as a placement resource.

We help you recruit the right doctor for your practice opening.

For more information, call or write:

Physicians Career Resource
American Medical Association
P.O. Box 10012
Chicago, IL 60610
(800) 955-3565



OPPORTUNITIES NATIONWIDE PHYSICIANS: ALL SPECIALTIES

All fees assumed by our client companies.
Submit curriculum vitae or call toll-free.

CLINICAL SEARCH ASSOCIATES

The Clinical Pavilion, Scott Plaza Two
Philadelphia, PA 19113

800-872-8626/215-521-5103

A division of PMGPC

EOE/M/F

BUSY ORTHOPEDIC OUTPATIENT OFFICE IS LOOKING
for physician with primary care background and maybe with
some orthopedic experience in Florida. Phone 813-933-
6666.

PRIVATE PRACTICE OPPORTUNITIES IN MINNESOTA:
Dermatology, Emergency Medicine, Geriatrics, Family Prac-
tice, Internal Medicine, Ophthalmology, Pediatrics. Contact:
Jerry Hess or Bill Tendle, LifeSpan, 800 East 28th Street,
Minneapolis, MN 55407. 800-248-4921.

UNIQUE FREE SERVICE TO PHYSICIANS

Register now with the nation's best resource for physicians
seeking new opportunities. Distributed to over 7,000
hospitals, clinics, group practices, HMO's, etc. throughout
the country. Completely confidential. Send CV and/or
letter outlining training, experience, interests, and geo-
graphical area.

NATIONAL PHYSICIANS REGISTER, DEPT J
295 Cambridge St., Suite 422
Boston, Mass 02114 (800) 342-1007

COUNTY HEALTH OFFICER/ADMINISTRATOR: LARAMIE
County, Cheyenne, WY needs qualified health officer/ad-
ministrator; clean, healthy, family-type environment, low
crime rate, good schools, excellent outdoor recreational
opportunities; good balance between clinical and adminis-
trative responsibilities; public health and administration
background preferred; doctor of medicine degree, Wyoming
licensed. Laramie County Personnel, 1915 Pioneer, Chey-
enne, WY 82001. 307-638-4355.

IMPORTANT OPPORTUNITIES FOR

DERMATOLOGIST OBSTETRICS-GYNECOLOGY
FAMILY PRACTICE PULMONOLOGIST
GASTROENTEROLOGIST UROLOGIST
GENERAL/THORACIC SURGEON

BE/BC for expanding 36 physician multispecialty group.
Dynamic area hub city of 30,000 ranked 7th in Midwest in
desirability/quality of life. Referral area 250,000 including
six important satellites. Superb secondary level hospital
advantages. Equidistant from Minneapolis and Des Moines
on I-35. Secure future with guaranteed salary, incentive
income, outstanding benefits. Information WATS 1-800-
798-4321, or write to Recruitment Coordinator, Park Clinic,
890 N. Eisenhower Ave., Mason City, Iowa 50401.

DENVER, COLORADO — COLORADO'S LARGEST MULTI-
specialty group practice HMO is seeking BC/BE Physicians in
the following specialties: Anesthesiology, Emergency Medicine,
Internal Medicine, Neonatology, Orthopedics, Otolaryngol-
ogist, Psychiatry, and Psychology. For additional information,
please contact: V.A. LaFleur, M.D., Associate Medical Director,
Colorado Permanente Medical Group, P.C., 10350 East
Dakota Avenue, Denver, CO 80231. 303-344-7294. EOE.

SOUTHERN CALIFORNIA: PRESTIGIOUS PHYSICIAN-RUN
multispecialty group practice seeking BC/BE physicians in
Internal Medicine, Internal Medicine/Infectious Disease,
Family Practice, Orthopedic Surgery, Urgent Care, Pediatric
Neurology, Cardiology, or Infectious Disease. Individuals for
consideration must be hard working, team players, and
enjoy California sunshine. Competitive salary with partner-
ship possible in 18 months. Located in one of the nation's
most rapidly growing areas, surrounded by excellent
schools, cultural and recreational facilities. Send C.V. to
Director of Physician Recruitment, Riverside Medical Clinic,
3660 Arlington Avenue, Riverside, CA 92506.

dorothea bowly associates

Medical Bureau
P.O. Box 347, Winnetka, Illinois 60093
Telephone: Area Code (312) 263-5293

Opportunities are available for Physicians in all Specialties
and General Practice; Associates, Solo & Group Practice;
Medical Education. Medical Directors. Clinical Investigation
or Occupational Medicine. Please write for our analysis form.
Dorothea Bowly, Director
established in 1957

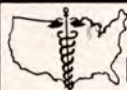
Thousands Of Doctors Get Away With It.

Kron pioneered locum tenens so you could take
your practice, and your life, where you want
them to go. You work as much as you want, when
you want. While we guarantee your income. Pay
your expenses. And provide the best malpractice
insurance around. It's a total package. And
it's only available from Kron. Call Kron at
1-800-MEDICAL.

KRON

Is Locum Tenens

Practice Made Perfect.



OVER 5000
PRACTICES NATIONWIDE
1-800-284-3322

PRACTICE OPPORTUNITIES, INC.
P.O. BOX 110379 NASH, TN 37222-0379

COLLEGE HEALTH PHYSICIAN: MODERN, DAY-TIME ONLY,
outpatient clinic. Beautiful campus, East Texas recreational
area. 10.5-month position, no call or hospital duties. Re-
quires primary-care experience, Texas license. Two open-
ings available: April 1991; September 1, 1991. Contact Dr.
Ray Johnson, P.O. Box 13058, SFA Station, Nacogdoches,
Texas 75962, 409-568-4008. EO/AEE.

Graduate Training/ Residencies Available

MANAGEMENT TRAINING FOR PHYSICIANS — THE UNC
KRON Scholars Program is America's model management
training program for current and future physician executives.
It consists of five intense, in-residence management training
sessions taught by the highly acclaimed faculty of the
Business School at the University of North Carolina, Chapel
Hill. Optional clinical field placements provide convenient
funding to offset tuition, and diversified experience in differ-
ent medical organizations. Apply with C.V. to: UNC KRON
Scholars, 725 Airport Road, 3rd Floor, Chapel Hill, NC
27514 or call: 1-800-633-4225, Dept. of Academic Affairs.

PGY-II POSITION IN INTERNAL MEDICINE BEGINNING
July 1, 1991 at West Suburban Hospital Medical Center. A
fully accredited, categorical, university-affiliated, community
hospital based program. Contact Malcolm A. Deam, M.D.,
Program Director, West Suburban Hospital Medical Center,
Oak Park, Illinois 60302. 708-383-6200, extension 6908.

NEED HELP IN PASSING BOARDS? TRY GUIDE TO suc-
cess in FLEX-SPEX-NMB-FMGES, 2nd Edition. \$12.00.
Overseas Publishing, P.O. Box 25577, Seattle, WA 98125.

COMBINED INTERNAL MEDICINE/PEDIATRIC GRAD
year 1: Unexpected opening in fully approved 4-year
program. Contact St. John Hospital and Medical Center,
Department of Health Education, 2211 Moross Road,
Detroit, Michigan 48236. 313-343-3875.

PGY-2 FAMILY PRACTICE. UNEXPECTED OPENING JULY
1, 1991. Send C.V.: Keith Ellis, M.D., Memorial Medical
Center, Inc., Department of Family Practice, P.O. Box 23089,
Savannah, GA 31403-3089.

ORGAN TRANSPLANT FELLOWSHIP: ORGAN TRANS-
plant Fellowship available July 1, 1991 at Boston University
Medical Center, Boston. Two year training program approved
by the American Society of Transplant Surgeons. Starting
salary is \$37,000 and completion of residency training in
general surgery is required. Please send C.V. to Transplant
Service, University Hospital, 88 E. Newton St., D-511,
Boston, MA 02118 or call 617-638-8430.

PGY-1 OPENING IN FAMILY MEDICINE AVAILABLE FOR
July, 1991. New state-of-the-art Family Health center. 504-
bed community hospital. Program affiliated with Mercer
University School of Medicine. Good pay, full medical
benefits, affordable living in beautiful, historical Macon,
Georgia. Contact: Dr. Robert L. Buckley, 3780 Eisenhower
Parkway, Macon, Georgia 31206.

FELLOWSHIP IN PAIN MANAGEMENT. MULTIDISCIPLI-
nary Pain Service at Massachusetts General Hospital seeks
fellows who desire intensive clinical experience in the care
of an extraordinarily diverse group of patients with acute or
chronic pain. This one-year fellowship meets the require-
ments for subspecialty certification in pain management
recently approved by the Accreditation Council for Graduate
Medical, and the guidelines for pain fellowship training
established by the International Association for the Study
of Pain. Comprehensive approach includes in-patient and
outpatient consultations on patients with chronic pain, di-
agnostic and therapeutic nerve blocks, and acute pain
consultation and treatment. Faculty are qualified in Anesthe-
siology, Neurology, Internal Medicine. Close collaborative
relationships with MGH/Harvard colleagues in Surgery,
Oncology, Psychiatry, Orthopedic Surgery, Neurosurgery,
Pediatrics and Rehabilitation. Busy and expanding program.
Salary commensurate with qualifications. Contact: Dr. Daniel
B. Carr, Harvard University Department of Anesthesia at the
Massachusetts General Hospital, Boston, MA 02114.

HEMATOLOGY FELLOWSHIP: FIRST YEAR POSITION
available July 1992. A 500-bed teaching hospital in NYC
(Manhattan). Excellent program. Oncology Fellowship: First
year position available July 1992. A 500-bed teaching
hospital in NYC (Manhattan). Excellent program. Contact:
Dr. Ariel Distenfeld, Cabrini Medical Center, 227 East 19th
Street, New York, NY 10022. 212-995-6629.

PLASTIC SURGERY FELLOWSHIP BEGINNING JULY 1991
for one year. Emphasis on spinal cord injury, reconstruction,
hand surgery and microsurgery. Send C.V.: Dr. Salzberg,
Burn Unit-WCMC, Valhalla, NY 10595.

PGY II POSITION IN FAMILY PRACTICE. ESTABLISHED,
University of Illinois affiliated, community based program in
metropolitan area of 350,000. No competing residencies. 8-
8-8 program in a 489 bed hospital. Salary \$26,500 plus
liberal benefits and paid work opportunities. Excellent resi-
dent and faculty group. Longitudinal behavioral science
emphasis. Contact Fred Z. White, M.D., Program Director,
Methodist Medical Center, 120 NE Glen Oak, Peoria, IL
61603. 309-672-5743.

HMSS Assembly Information Exchange
Thursday, June 20, 1991
7:00 p.m. - 8:30 p.m.

PRO and Managed Care Review: Combating the Hassle Factor

A distinguished panel to include Alice G. Gosfield, JD, Alice G. Gosfield and Associates, Philadelphia; T. Reginald Harris, MD, AMA Council on Medical Service; and Bob Becker, MD, American Medical Care Review Association, Washington, DC., will be available to provide the most recent activities and advancements made in dealing with the hassle factor of interaction with regulatory systems and managed care companies.

Following the presentations, a 45-minute question-and-answer period will permit medical staff participants to offer questions regarding their day-to-day interactions with medical review organizations, and ideas for combating the hassle factor.

Assembly Education Program
Friday, June 21, 1991
2:30 p.m. - 5:30 p.m.

Part 1: Update on JCAHO: The AMA Perspective

AMA JCAHO Board of Commissioners will bring HMSS Representatives up to date on their interactions and initiatives with the JCAHO, undertaken in the interest of medical staffs.

Part 2: Practice Parameters: Policy, Applications and Issues

American Medical Association's extensive activities in the practice parameters arena will be addressed, as well as current applications and advancements in the development of practice parameters.

A question-and-answer session will be provided after each panel discussion.

For Information Contact:

Department of Hospital Medical Staff Services
American Medical Association
515 North State Street
Chicago, Illinois 60610
Phone (312) 464-4754 or 464-4761



HMSS

FELLOWSHIP POSITIONS AVAILABLE BEGINNING JULY 91 at the Washington Hospital Center in transplant Surgery for graduates of general Surgery or Urology training programs. Send C.V.s to or call: Dr. Jimmy Light, Director, Transplantation Services, Washington Hospital Center, 110 Irving Street, NW Washington, DC 20010. 202-877-6059 or 1-800-252-2442.

Locum Tenens Wanted

CHALLENGING LOCUM TENENS POSITIONS AVAILABLE now. Work at your convenience, full or part-time. Competitive compensation. No hassles, politics or paperwork. Paid malpractice insurance, housing and transportation. Put an experienced leader to work for you! Contact: Locum Medical Group, 30100 Chagrin Blvd., Cleveland, Ohio 44124, 1-800-752-5515.

IPR MEDICAL, INC. Placement and Recruitment

Permanent and Locum Tenens
Placement for Physicians
We work Nationwide and specialize in . . .
YOU

7207 W. Greenfield Ave. • Milwaukee, WI 53214
1-800-966-3627 • 1-414-257-3959 • FAX 1-414-257-3691

For: Professional, Personalized, Successful
Locum Tenens and Permanent Positions
Contact:
PHYSICIAN PLACEMENT SPECIALISTS
Jerry Ortiz, President
P.O. Box 791
Brookfield, WI 53008-0791
1-800-776-7212
414-784-9524

**When you
decide to
expand your
horizons...**



...contact Locum Tenens, Inc.
Excellent practice locations
nationwide. Assignments from
two weeks to one year. Paid travel,
malpractice, lodging and trans-
portation, competitive salaries,
licensure, and an experienced staff
to coordinate your activities.



**LOCUM
TENENS, INC.**

A Division of Jackson and Coker

1-800-272-2707 ext.62

115 Perimeter Center Place / Suite 380-JDLT1 / Atlanta, GA 30346

Physician Executives Can't Manage Without It.

Our UNC Kron Scholars Program provides valuable training and certification for managing medical services. You'll receive in-depth executive education from the prestigious business school at UNC-Chapel Hill. Optional field placements enhance your experience and pay your tuition. Call our Department of Academic Affairs at 1-800-MEDICAL.

KRON

Is Locum Tenens

Practice Made Perfect.

IT'S EVERYTHING YOU LOVE ABOUT MEDICINE

AND LESS

It's staying involved in medicine without practicing full-time, running a business, or managing a staff. It's treating patients. Working where your skills are really needed and appreciated. Teaching and learning from respected colleagues. Seeing the country. Earning a good income.

It's locum tenens practice with CompHealth, the nation's locum tenens leader.

Because sometimes, less is more.

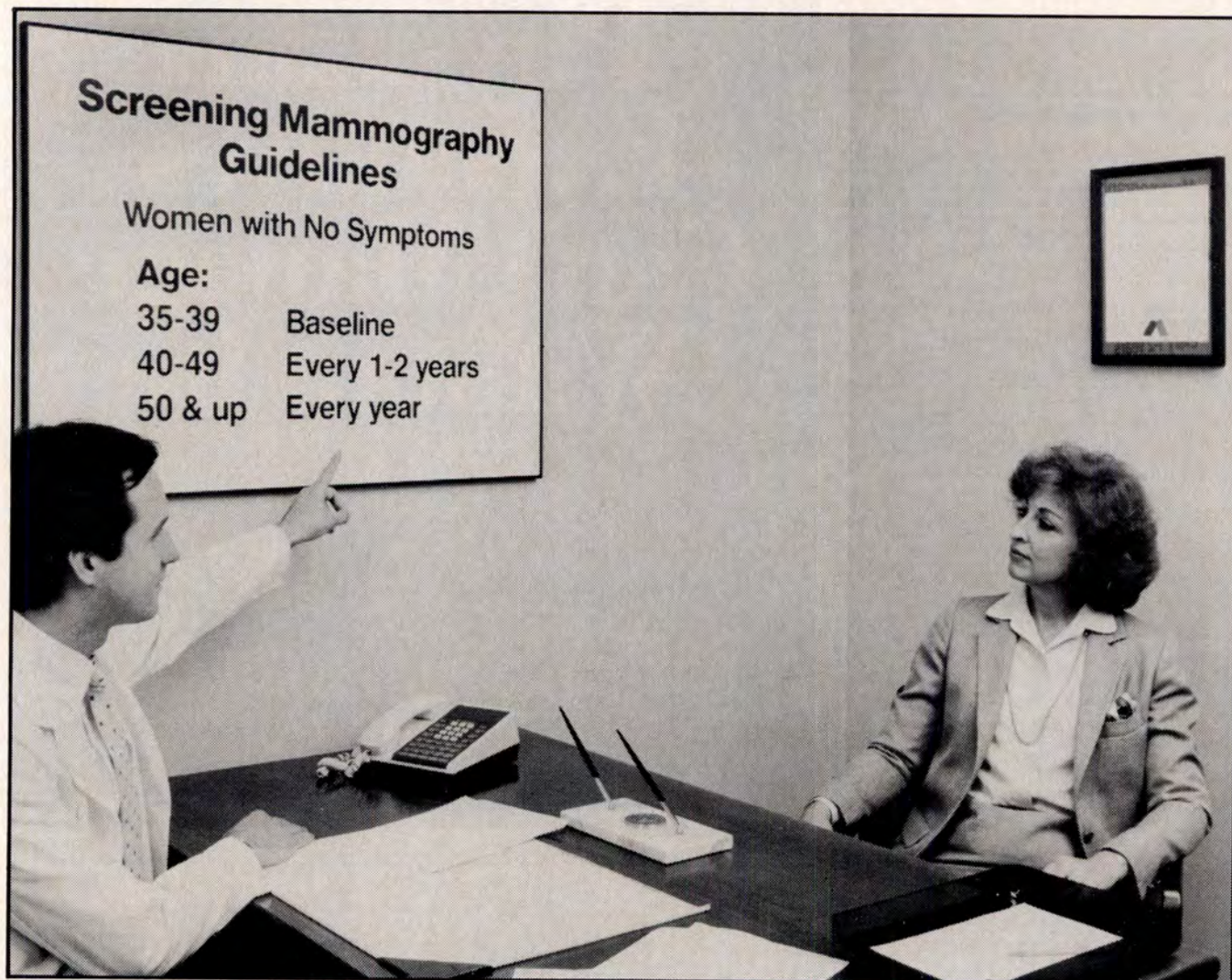
CompHealth

THE PHYSICIAN GROUP

1-800-453-3030

Salt Lake City • Atlanta • Grand Rapids, Mich.

Ask about The
CompHealth/Harvard Career
Strategy Program
for Physicians!



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with

your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.



Professional Education Dept.
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society



American
College of
Radiology

1891 Preston White Drive
Reston, Virginia 22091
(703) 648-8900

VISTA

STAFFING SOLUTIONS

- Freedom
- Flexibility
- Responsibility



A Locum Tenens Group

For information call:

1-800-366-1884

VISTA Staffing Solutions

675 East 2100 South, Suite 390
Salt Lake City, Utah 84106

Careers Have Been Changed By It.

Kron is the perfect way to change your practice or transform your career. Because your Kron experience allows you to define new goals. Explore new possibilities. Develop new pursuits. And discover what you want out of life. Think you're ready for a change? Call Kron at 1-800-MEDICAL.

KRON

Is Locum Tenens

Practice Made Perfect.

LOCUM TENENS



PHYSICIANS
CAREER
RESOURCE

CAREER
FLEXIBILITY
FOR TODAY'S
PHYSICIAN

The broad career plans of many physicians demand flexibility. They want time away from their practices for continuing education or personal pursuits. And to maintain the integrity of their practices, they recruit short-term replacements. The AMA's Locum Tenens Service is the ideal resource for physicians interested in assignments of less than a year.

For registration information contact:

Locum Tenens Service
Physicians Career Resource
American Medical Association
P.O. Box 10012
Chicago, IL 60610
(800) 955-3565



INSULIN IS NOT A CURE FOR DIABETES. IT JUST KEEPS PEOPLE ALIVE UNTIL WE FIND ONE.

Support the Research of the
American Diabetes Association



American
Diabetes
Association



Resident Physicians:



**Plan to participate in the
AMA-RPS Annual Assembly Meeting
June 21-22, 1991
Chicago, IL**

Residents from across the country will be addressing vital issues and concerns such as *resident work hours and supervision, student loan deferment, and maternity leave* at the meeting.

A highlight of the meeting is an educational program on resident physician and medical student abuse. This timely program will give special attention to the incidence and types of abuse, ways of managing and controlling abuse, and recourse for the abused.

The Resident Physicians Section of the American Medical Association, nearly **40,000** members strong, is a vital component of organized medicine, and represents the needs and concerns of all resident physicians. To be part of the AMA-RPS is to be part of the most active and influential organization of residents in the country.

For further information about the meeting or joining the AMA-RPS, contact the AMA Department of Resident Physician Services;
312/464-4751

AMA | RPS

Chiefs/Department Heads/ Directors/Faculty

THE MEDICAL CENTER OF DELAWARE, AN 1100-BED, tertiary care major teaching affiliate of Thomas Jefferson University, seeks a full-time Chairman of the Department of Obstetrics-Gynecology. Over 6500 deliveries and 34,000 operations are done annually. There is an approved, successful OB-GYN residency program and an active research program. Candidates should have recognized clinical skills, proven administrative ability and experience in managing OB-GYN residency and research programs. The successful candidate will have a senior academic appointment at Jefferson Medical College of the Thomas Jefferson University in Philadelphia, Pennsylvania. Please send Curriculum Vitae and three references to George Hilty, M.D., Chairman, Search Committee, Medical Center of Delaware, c/o Patti Falkowski, CMSC, P.O. Box 1668, Wilmington, DE 19899. The Medical Center of Delaware is an Affirmative Action/Equal Opportunity Employer.

MEDICAL DIRECTOR/SOUTHERN FLORIDA: LIBERTY Healthcare Corporation, a physician-owned medical management group, seeks a BE/BC physician for the position of Medical Director for a modern, long term care facility in sunny, warm Southern Florida. Position offers a highly competitive salary, paid malpractice insurance, nine weeks paid time off, and relocation assistance. Candidate with medical administrative management background, please contact Dr. Herbert T. Caskey, M.D., Liberty Healthcare, 399 Market St., Ste. 400, Phila., PA 19106. You may fax your C.V. to 215-592-4652 for an immediate response. EOE.

INSTRUCTOR/NEONATOLOGIST DEPARTMENT OF PEDIATRICS at Mount Sinai Hospital Medical Center seeks applicants to engage in teaching and medical research. Requirements include M.D., Pediatric Residency, Neonatal-perinatal Fellowship, and skills/experience conducting basic research in the development of the kidney. Additional interest in clinical research is encouraged. Academic appointment is with the UHS/Chicago Medical School and is commensurate with qualifications. Applicants must possess a State of Illinois Medical License or be immediately eligible thereof. Send Curriculum Vitae and 3 letters of recommendation to: Howard B. Levy, M.D., Chairman, Department of Pediatrics, Mount Sinai Hospital Medical Center, 15th Street at California Avenue, Chicago, Illinois 60608. Mount Sinai Hospital Medical Center is an Affirmative Action/Equal Employment Opportunity Employer.

CHAIRMAN, DEPARTMENT OF ANESTHESIOLOGY. SEEKING Board Certified Anesthesiologist to provide independent contract services in a non-teaching community hospital which does not have obstetrics or heart surgery services. Contractor would also serve as Chairman of the Medical Staff Department of Anesthesiology. Located in the Virginia suburbs of Washington, D.C. Relocation assistance available. Please respond with C.V. to Box 6771, c/o JAMA.

**There's only
one way to
come out ahead
of the pack.**

QUIT



**American Heart
Association**

WE'RE FIGHTING FOR
YOUR LIFE

PROGRAM DIRECTOR FAMILY PRACTICE

Bartlesville Family Medicine Center, Department of Family Practice, University of Oklahoma College of Medicine - Tulsa, Oklahoma and Jane Phillips Episcopal-Memorial Medical Center are jointly seeking a Program Director for a rejuvenated university-affiliated community-based program associated with a 300 bed community hospital. It is a 1-2 program with a total of 12 residents. Academic appointment as Assistant/Associate Professor based on experience.

Candidates for this position must have an M.D. degree from a recognized medical school and be Board Certified in Family Practice. Two years of practice and two years of administrative teaching experience is required. Must be eligible for licensure in Oklahoma. Salary is based on experience with a full range of benefits.

This position is located in Northeastern Oklahoma's "Green Country", 45 miles north of Tulsa. With a population of 35,000, Bartlesville has multiple outdoor water recreational activities, excellent schools, a superb retirement community and is the Corporate headquarters of Phillips Petroleum Company.

Interested applicants please send resume and questions to: T.L. Johannesen, M.D., 3500 S.E. Frank Phillips Blvd., Bartlesville, Oklahoma 74006, or Jon Calvert, M.D., Ph.D., Chair, Department of Family Medicine, University of Oklahoma College of Medicine - Tulsa, 2808 S. Sheridan Road, Tulsa, Oklahoma 74129.

An Equal Opportunity Employer



UNIVERSITY OF FLORIDA: DEPARTMENT OF COMMUNITY Health and Family Medicine seeking full-time, tenure track Assistant or Associate Professor for teaching, patient care, medical directorship of nursing home, and related scholarly activities in Family Practice Residency Program and undergraduate program. Must have M.D., interest in geriatrics and BC/FP. Application receipt closing date is June 14, 1991. Send C.V. and three recommendation letters to: Ken Grauer, M.D., University of Florida College of Medicine, 625 S.W. 4th Avenue, Gainesville, Florida 32601. Equal Employment Opportunity/Affirmative Action Employer.

VICE PRESIDENT MEDICAL AFFAIRS: EXCELLENT OPPORTUNITY for a physician to assume responsibility for a senior medical/administrative position in the newly created position of Vice President Medical Affairs. Individual will act as a full time liaison to assure both medical staff input and participation in hospital administrative affairs. Our modern and expanding hospital is located in beautiful, central New Jersey on the Bay of the Atlantic Ocean. The hospital is near beaches and marinas and just 45 minutes drive to New York City. We offer a competitive salary and a modern full range flexible benefits program. Experience in medical administrative management is preferred. Interested physicians should submit Curriculum Vitae and salary requirements to: Mr. Stephen Kay, Executive Vice President, Bayshore Community Hospital, Bayshore Community Health Services, Inc., 727 No. Beers Street, Holmdel, NJ 07733. E.O.E.

PRINCIPAL OFFICER, AMERICAN RED CROSS. THE Appalachian Regional Blood Services program in Roanoke, Virginia is looking for a dynamic, medical executive to manage a medium-sized blood operation, extensively regulated by federal and state agencies, offering a full range of services. This is a part-time or full-time position reporting to the Senior Vice President, Biomedical Services (Washington, D.C.) and is a member of the national Blood Services Executive staff. Requirements include: "M.D. (hematology, pathology) with a minimum of 7 years progressively responsible experience in blood or a related field. Licensure to practice medicine in Virginia required. "Business management skills preferred. Board certification in blood banking desirable. Roanoke, Virginia offers an excellent environment for families, and an opportunity to get away from the hustle and bustle of a metropolitan area. Salary is negotiable. An excellent opportunity for advancement within the American Red Cross system. Minorities are strongly encouraged to apply. EOE, M/F/H/V. Send Curriculum Vitae to: The American Red Cross, Attn: William J. Branscom, Chairman, Principal Officer Search Committee, 352 Church Avenue, SW, Roanoke, VA 24016.

ACADEMIC FACULTY POSITIONS AT THE ASSISTANT/Associate Professor level for the following: Glaucoma Specialist, Resident Director. Both require BE/BC and New York license; glaucoma requires fellowship training. Teaching, research, patient care. The State University of New York at Buffalo is an AA/EEO Employer. Send C.V. to Ophthalmology Department, ECMC, 462 Grider Street, Buffalo, NY 14221.

Director

Spine Center

The Cleveland Clinic Foundation is seeking a Medical Director for its multidisciplinary Spine Center. The Center serves as the primary access point for patients with spinal disorders and has its own dedicated space with exam rooms, psychiatric consultation, staff and ancillary offices. It has its own dedicated physical therapy staff and is immediately contiguous to the Pain Management and Physical Therapy areas. All involved services are fully integrated. The Spine Center is an autonomous business unit with its own table of organization, capital and operational budget.

Candidates should have specialist training and/or experiences in the spinal disorders as well as an interest in teaching and research. Income and academic rank are dependent upon qualifications and experiences. Send your CV to Jane Sheahan-McMahon, The Cleveland Clinic Foundation, H-18, 9500 Euclid Avenue, Cleveland, Ohio 44195.

THE CLEVELAND CLINIC FOUNDATION

An Equal Opportunity Employer M + F + V
Smoke-Free Environment

THE UNIVERSITY OF MICHIGAN MEDICAL SCHOOL, Department of Radiology, has on occasion open faculty positions within the Department and its affiliated hospitals. Physicians filling these positions will take part in the program of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of House Officers and aid in the teaching of House Officers and medical students. Qualified applicants must be American Board of Radiology-Certified or Board-Eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience. Interested applicants should contact: William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, MI 48109-0030. A Nondiscriminatory, Affirmative Action Employer.

CARDIOLOGISTS: ACADEMIC RADIOLOGISTS: CLINICAL noninvasive cardiologists (BC/BE), preferably with expertise in echocardiography and/or nuclear cardiology needed for full-time tenure track or non-tenure track positions at Assistant or Associate Professor level. Position involves clinical duties and teaching responsibilities, with opportunity for clinical research in active, fast-paced setting with growing section. Superb clinical material and experienced senior faculty make this an excellent choice for academically-oriented individuals. Reply with C.V. and letter stating personal and career goals to: Charles M. Gross, M.D., Associate Professor of Medicine and Interim Chief of Cardiology, Medical College of Georgia, Augusta, GA 30912-3105. EOE/AAP.

ASSOCIATE DEAN FOR ACADEMIC AFFAIRS/DIRECTOR of Medical Education. Applications are invited for a newly created position of Associate Dean for Academic Affairs of the School of Medicine and Director of Medical Education at the Medical Center of Central Georgia, the school's principal teaching hospital. Responsibilities include medical student education, graduate medical education, continuing medical education, library and learning resources. An M.D. is required. Experiences with small group, problem-based learning and medical education programs in a community hospital are desirable. Women and minorities are encouraged to apply. C.V.'s should be sent to: W. Douglas Skelton, M.D., Provost for Medical Affairs and Dean; Mercer University School of Medicine, 1550 College Street, Macon, Georgia 31207. Deadline for receipt of applications is June 1, 1991. Starting date is July 1, 1991. Mercer University is an Affirmative Action, Equal Opportunity Employer.

FACULTY POSITION AVAILABLE AS RESEARCH ASSISTANT Professor of Surgery. Candidates must have Ph.D. in physics or biophysics, with expertise in nonlinear dynamical analysis and its applications to cardiovascular physiology. Working familiarity with computer hardware, computer language programming and interfacing with physiological transducers required. Send Curriculum Vitae, bibliography and three recommendation letters to Box 6791, c/o JAMA. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.

Practices For Sale

FAMILY PRACTICE. WELL ESTABLISHED, NEAR ST. LOUIS in Illinois, fully equipped office. 1137 Birchgate, St. Louis, MO 63135. 314-521-7933.

FLORIDA GENERAL OPHTHALMOLOGY PRACTICE. Turn-key operation. Seller wishes to retire after 20 years eye surgery/medicine in Northeast Florida oceanside community. Reply to Box 6760, c/o JAMA.

BUYING OR SELLING A PRACTICE? LET JACKSON AND COKER SHOW YOU HOW! CONTACT — BETTE CLOUD

1-800-544-1987
Practice Sales and Transition Consulting
Services, Practice Appraisal Services,
Practice Listing Service
115 Perimeter Center Place
Suite 380 JPB1, Atlanta, GA 30346

PACIFIC NORTHWEST, PORTLAND OREGON AREA. Large family practice, some lab facilities and X-Ray plus computerized bookkeeping. Well-established practice 20 minutes from downtown Portland, in suburban community of approximately 30,000 located on Lake Oswego. Nine hospitals within radius of 7 to 25 miles. Practice set-up to operate 4 days per week with extra half-day on alternate weekends. Could expand if you so desire. 1½ hours driving time from picturesque Oregon coast or Cascade mountains which offer year-round skiing. Physician retiring. Flexible terms. For further information call 503-636-4535.

FAMILY PRACTICE, CALIFORNIA, MONTEREY BAY AREA. Ideal coastal climate. Gross 210K. Established 13 years, fully equipped, small lab, beautiful new building. Price \$55K, terms. Call 408-722-9629.

SO. CALIFORNIA FAMILY PRACTICE NEAR LONG BEACH, CA. High income area. Gross \$360,000+/year. X-Ray lab, treadmill, much equipment. \$200,000. 213-809-1200.

SOLO ALLERGY PRACTICE IN OKLAHOMA CITY FOR sale by retiring Allergist. Established clinic, well staffed, in ideal medical location, with excellent growth potential. 100% financing available. Send responses to Box 6781, c/o JAMA.

DERMATOLOGY PRACTICE AVAILABLE: FALL 1991. Excellent income opportunity in expanding area of Middle Tennessee. Great fishing and hunting; close to metropolitan areas. Reply to Box 6784, c/o JAMA.

BEAUTIFUL OLYMPIA, WASHINGTON. ASSUME ESTABLISHED solo practice of retiring family physician. Richard Grant, MD, 1407 College St., SE, Olympia, WA 98503.

LUCRATIVE INTERNAL MEDICINE PRACTICE FOR SALE in historic coastal town, southern Delaware. Office adjacent to modern 130-bed hospital. Excellent growth potential. Good schools and recreational activities in surrounding area. Reply Internal Medicine, 400 Savannah Road, Lewes, Delaware 19958. 302-645-6910 evenings.

OFFICE OB/GYNCOLOGY AND PRIMARY CARE PRACTICE for sale. Must go. Ideally located in Downers Grove with access to 3 community hospitals. Fully equipped office. Price \$42,000. Call 1-708-852-2204.

For Sale/For Rent/Real Estate

SAN JOSE, CALIFORNIA. MEDICAL 1707 S.F. BUILDING for sale. Campus environment. Agent 408-867-2582.

JAMA Journal Club

Required readings from the May 15, 1991, issue

1. Health Insurance Values and Implementation in the Netherlands and the Federal Republic of Germany, p 2496.
2. Health Access America—Strengthening the US Health Care System, p 2503.
3. Universal Health Insurance Through Incentives Reform, p 2532.

Additional recommended readings

1. Magistrelli P, et al. Surgical treatment of hydatid disease of the liver: a 20-year experience. *Arch Surg.* 1991;126:518-523.
2. Frangieh GT, et al. Prospective corneal topographic analysis in surgery for postkeratoplasty astigmatism. *Arch Ophthalmol.* 1991;109:506-510.
3. Hinman AR. What will it take to fully protect all American children with vaccines? *AJDC.* 1991;145:559-562.

Index to advertisers

Astra Pharmaceuticals

Metoprolol 2438-2439

Boehringer Mannheim Corp.

Corporate 2457

Tracer II 2477

Bristol Myers/Squibb Pharmaceuticals

Capoten 2443-2444, 2597-2598

Corgard 2452A-D*, 2600A-B*

Corporate 2462-2463

Burroughs Wellcome Company

Lanoxin 2584A-B*

Zovirax 2579-2580

Center Laboratories

Epipen Auto-Injector 2475

Ciba Pharmaceuticals

Transderm-Scop 2455-2456

Cigna Healthplan

Recruitment 2450

Eastman Kodak

Clinical products 2440

Forest Pharmaceuticals

Aerobid 2470-2472

Glaxo Incorporated

Zantac 2576A-H*

Herbert Laboratories

Elimite 2522-2524

Hoechst-Roussel Pharmaceuticals

Altace 2577-2578

Trental 2594-2596

ICI Pharma, Division of

ICI Americas, Inc.

Tenormin 2520A-B*

Janssen Pharmaceuticals

Hismanal 2446-2448

Knoll Pharmaceuticals

Isoptin 2476C-D

Kramer Laboratories

Charcoal Plus 2604

Lederle Laboratories

Suprax 2575

Marion Merrell Dow, Inc.

Carafate 2452E-F

Cardizem 2484A-D*, 2608A-B*

McNeil Laboratories

Lactaid 2585

Tylenol 2473

Merck Sharp & Dohme

Pepcid 2476, 2476A-B*

Vasotec 2592A-B*

Miles, Inc.

Cipro 2520C-D

National Dairy Board

Corporate 2485

National Livestock & Meat Board

Corporate 2582-2583

Ortho Pharmaceutical Corp./McNeil Pharmaceutical

Floxin 2444A-J*

Roche Laboratories, Div. of Hoffmann-LaRoche, Inc.

Accutane 2486-2489

Medical Director's Page 2568

Medical Education 2478-2479

Valium Cover 2, 2437

Vitamins 2601-2602

Roerig, Div. of Pfizer, Inc.

Cardura 2460A-F

Diffucan 2468A-D

Sinequan 2449-2450

Schering Laboratories

Gyne-Lotrimin 2586-2587

G. D. Searle Company

Calan-SR 2465-2468

Cytotec 2484E-F*

Stuart Pharmaceuticals

Zestril 2568A-D*, 2569

Syntex Laboratories, Inc.

Anaprox 2570-2572

U.S. Air Force

Recruitment 2593

U.S. Navy

Recruitment 2521

U.S. Public Health Service

Recruitment 2603

University of California at Los Angeles

Recruitment 2450

Upjohn Company

Xanax Cover 3, Cover 4

Whitehall Laboratories

Advil 2599

Wyeth-Ayerst Laboratories

Orudis 2490

*Demographic/Geographic Insert

While every precaution is taken to ensure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

XANAX® Tablets
(alprazolam, & Upjohn)

INDICATIONS AND USAGE

Generalized anxiety disorder, short-term relief of the symptoms of anxiety, and anxiety associated with depression. Anxiety or tension associated with the stress of everyday life usually does not require an anxiolytic.

Panic disorder, with or without agoraphobia.

Effectiveness has been established for up to 4 months for anxiety disorder and 4 to 10 weeks for panic disorder; but panic disorder has been treated open label for up to 8 months with no apparent loss of benefit. The usefulness should be reassessed periodically.

CONTRAINDICATIONS

Sensitivity to XANAX or other benzodiazepines and in acute narrow-angle glaucoma.

WARNINGS

Dependence and withdrawal reactions, including seizures

Physical dependence to XANAX can produce certain adverse clinical events, some life-threatening. These include a spectrum of withdrawal symptoms—the most important is seizure. Even after relatively short-term use at 0.75 to 4 mg per day, there is some risk of dependence; but the risk and severity seem to be greater in patients treated with doses above 4 mg/day for more than 8 to 12 weeks.

Treatment of panic disorder: Dose and risks of XANAX

Panic-disorder patients often need doses greater than 4 mg/day, hence the risk of dependence may be greater than in patients treated for less severe anxiety. Based on studies involving 641 patients, the most frequent symptoms seen during discontinuation were:

Neurologic: Insomnia, light-headedness, abnormal involuntary movement, headache, muscular twitching, impaired coordination, muscle-tone disorders, weakness.

Psychiatric: Anxiety, fatigue and tiredness, irritability, cognitive disorder, memory impairment, depression, confusional state.

Gastrointestinal: Nausea/vomiting, diarrhea, decreased salivation.

Other systems: Weight loss, decreased appetite, sweating, tachycardia, blurred vision. It has not yet been determined if these symptoms are clearly related to dose and duration of therapy. In two controlled trials of the discontinuation of XANAX lasting 6 to 8 weeks, 71% to 93% of patients treated with XANAX compared with 89% to 96% of placebo patients tapered completely off medication. The ability of patients to completely discontinue after long-term therapy has not been reliably determined.

Seizures were reported in 8 of 1,980 patients who took more than 4 mg XANAX daily for over 3 months, generally during abrupt dose reduction. There have been occasional reports of seizures during gradual taper; the risk seems to be greatest 24 to 72 hours after discontinuation.

Status epilepticus and its treatment: Discontinuation of XANAX has been associated with seizures. In most cases a single seizure was reported; however, multiple seizures and status epilepticus have been reported. Treatment is the same as that for status of any cause.

Interdose symptoms: Early morning anxiety and emergence of anxiety symptoms between doses have been reported in panic patients taking XANAX. It can usually be managed with more frequent administration of the same total daily dose or by increasing total dosage.

Risks of dose reduction: Withdrawal reactions may occur with dosage reduction for any reason; dosage should be reduced gradually. (See DOSAGE AND ADMINISTRATION.)

XANAX is not of value in treating psychosis and should not be used in lieu of appropriate treatment. Patients receiving XANAX should be cautioned about hazardous occupations or activities requiring full alertness and also about simultaneous ingestion of alcohol or other CNS depressants.

Benzodiazepines can cause fetal harm in pregnant women, hence women who may become pregnant should be warned. Avoid during the first trimester. (See DRUG ABUSE AND DEPENDENCE and DOSAGE AND ADMINISTRATION.)

PRECAUTIONS

General: If XANAX is combined with other psychotropics or anticonvulsants, consider drug potentiation. (See DRUG INTERACTIONS.) Use the usual precautions in patients with impaired renal, hepatic, or pulmonary function and regarding prescription use in depressed and suicidal patients. Use the smallest effective dose to avoid ataxia or oversedation, which may be a particular problem in elderly or debilitated patients. Alprazolam plasma half-life may be prolonged in obese patients or those with alcoholic liver disease. There have been rare reports of death in patients with severe pulmonary disease shortly after the start of therapy with XANAX. Episodes of mania and hypomania have been reported in depressed patients. Alprazolam is weakly uricosuric.

Information for patients: For all users of XANAX. Alert patients about:

(1) consumption of alcohol and drugs, (2) not taking any benzodiazepine during pregnancy or while nursing, (3) operating machinery or driving, (4) not increasing the dose due to risk of dependence, (5) not stopping the drug abruptly.

Additional advice for panic patients:

Use of more than 4 mg per day of XANAX for long periods of time may cause severe emotional and physical dependence in some patients, and these patients may find it difficult to stop treatment. In two studies lasting 6 to 8 weeks, 7% to 29% of patients treated with XANAX did not completely taper off therapy. The ability of patients to completely discontinue therapy has not been determined. Also, extended use of high doses appears to increase the incidence and severity of withdrawal reactions when XANAX is discontinued. These are generally minor, but seizure, which can be life-threatening, can occur, especially if dose is reduced too rapidly or stopped abruptly.

Laboratory tests: Not ordinarily required in otherwise healthy patients.

Drug interactions: Additive CNS depressant effects with other psychotropics, anticonvulsants, antihistamines, ethanol, and other CNS depressants. Plasma levels of imipramine and desipramine are increased. Pharmacokinetic interactions with other drugs have been reported. Cimetidine and oral contraceptives can delay clearance of benzodiazepines. **Drug/laboratory test interactions:** No consistent pattern. **Carcinogenesis, mutagenesis, impairment of fertility:** No carcinogenic potential or impairment of fertility in rats. **Pregnancy:** See WARNINGS. **Nonteratogenic effects:** The child born of a mother on benzodiazepines may be at some risk for withdrawal symptoms, neonatal flaccidity, and respiratory problems. **Labor and delivery:** No established use. **Nursing mothers:** Benzodiazepines are excreted in human milk. Women on XANAX should not nurse. **Pediatric use:** Safety and effectiveness in children below the age of 18 have not been established.

ADVERSE REACTIONS
Side effects are generally observed at the beginning of therapy and usually disappear with continued medication. In the usual patient, the most frequent side effects are likely to be an extension of the pharmacologic activity of XANAX, eg, drowsiness or light-headedness.

Central nervous system: Drowsiness, light-headedness, depression, headache, confusion, insomnia, nervousness, syncope, dizziness, akathisia, and tiredness/sleepiness. Impaired coordination, irritability, memory impairment, cognitive disorder, dysarthria, anxiety, abnormal involuntary movement, changed libido, muscular twitching, weakness, muscle-tone disorders, agitation, disinhibition, paresthesia, talkativeness, vasomotor disturbances, derealization, dream abnormalities, fear, feeling warm.

Gastrointestinal: Dry mouth, constipation, diarrhea, nausea/vomiting, increased salivation, decreased salivation, and abdominal distress.

Cardiorespiratory: Tachycardia/palpitations, hypotension, nasal congestion, chest pain, hyperventilation, upper respiratory infection.

Other: Blurred vision, rigidity and tremor, tinnitus, muscular stiffness and cramps, sweating, skin disorders, rash, change in appetite, micturition difficulties, menstrual disorders, sexual dysfunction, edema, incontinence, infection, dermatitis/allergy, weight gain, and weight loss.

Withdrawal seizures with rapid decrease or abrupt discontinuation. (See WARNINGS.)

To discontinue treatment, dosage must be reduced slowly by no more than 0.5 mg every 3 days.

The following adverse events have been reported with benzodiazepines: dystonia, concentration difficulties, anorexia, slurred speech, jaundice, pruritus, diplopia.

Untreated panic disorder has been associated with depressive disorders and suicide. When treating panic patients, the same caution must be used as in treating patients with depression or suicidal ideation.

Paradoxical reactions such as stimulation, agitation, rage, increased muscle spasticity, sleep disturbances, and hallucinations may occur. Should these occur, discontinue the drug.

During prolonged treatment, periodic blood counts, urinalysis, and blood chemistry analysis are advisable. Minor EEG changes, of unknown significance, have been observed.

Liver enzyme elevations, gynecomastia, and galactorrhea have been reported, but no causal relationship was established.

DRUG ABUSE AND DEPENDENCE

Physical and psychologic dependence: Withdrawal symptoms like those noted with sedative/hypnotics and alcohol have been seen after discontinuance of benzodiazepines. Symptoms can range from mild dysphoria and insomnia to a major syndrome including abdominal and muscle cramps, vomiting, sweating, tremors, and convulsions. The distinction between withdrawal symptoms and recurrence of illness is difficult. Withdrawal typically includes new symptoms, occurs toward the end of taper or shortly after discontinuation, and decreases with time. Recurrent panic disorder recurs early or late, with persistent symptoms similar to the initial presentation. When necessary XANAX should be restarted in adequate dosage.

Withdrawal symptoms, including seizures, may occur after brief therapy with doses of 0.75 to 4 mg/day, but severity and incidence are apparently increased after doses above 4 mg/day, after rapid decrease of dosage or abrupt discontinuation. Dosage should be gradually tapered under close supervision, especially in patients with a history of seizures or epilepsy.

Psychologic dependence is a risk with all benzodiazepines, increasing at higher doses, with long-term use, and in patients with a history of alcohol or drug abuse. Addiction-prone patients should be closely supervised when receiving XANAX and repeat prescriptions limited.

Controlled Substance Class: XANAX is a controlled substance and has been assigned to schedule IV.

OVERDOSAGE

Manifestations include somnolence, confusion, impaired coordination, diminished reflexes, and coma. Death has been reported with overdosage of benzodiazepines by themselves or in combination with overdosage of alcohol.

DOSAGE AND ADMINISTRATION

Dosage should be individualized, using the lowest effective dose. The need for treatment should be reassessed frequently.

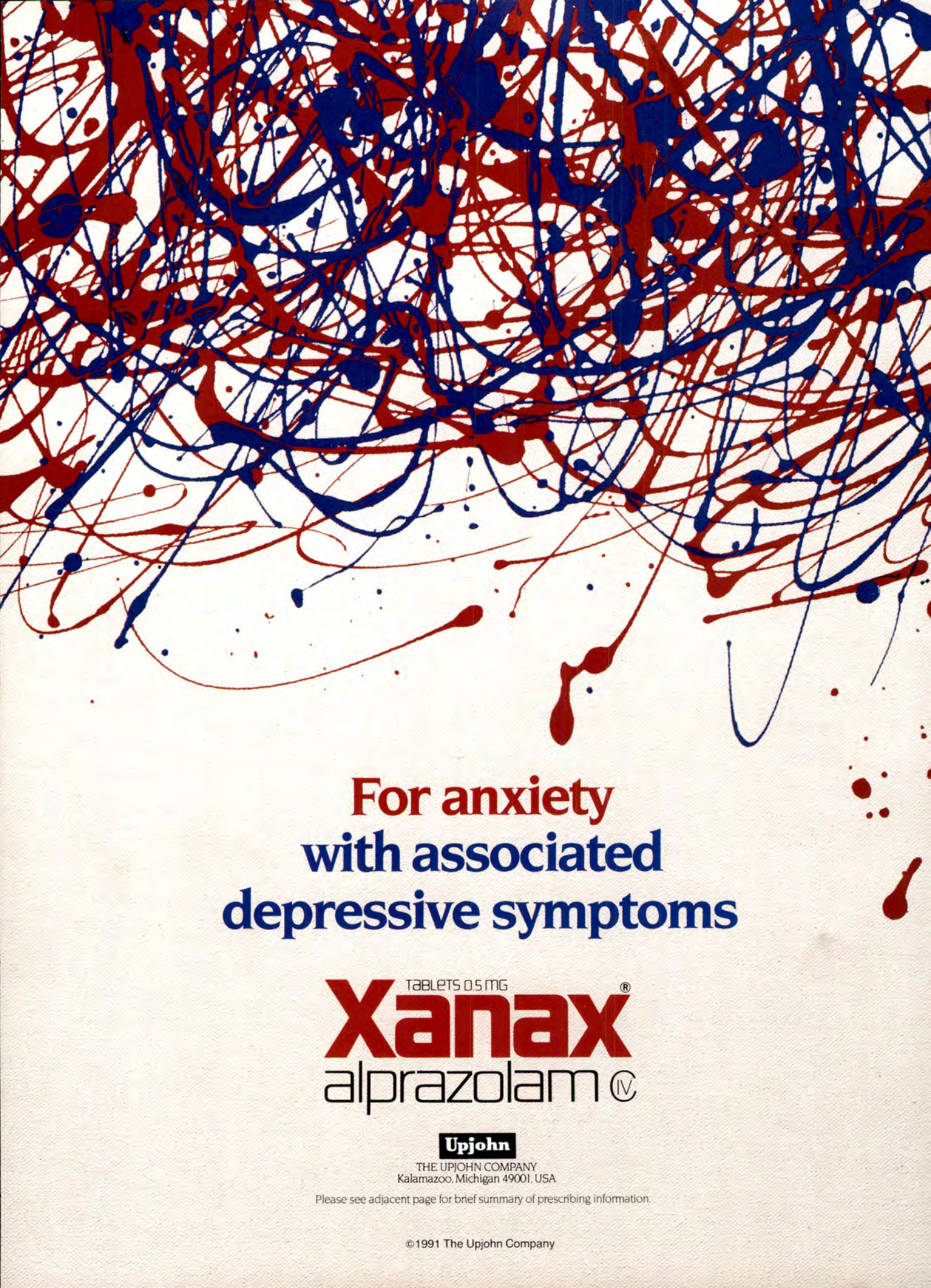
Anxiety: The usual starting dose is 25 to 0.5 mg t.i.d. Maximum daily dose is 4 mg. Patients who are elderly or debilitated, or have advanced liver disease, may be especially sensitive to benzodiazepines, and the starting dose is 0.25 mg b.i.d. or t.i.d. Reduce dosage gradually, by no more than 0.5 mg every 3 days, or more slowly.

Panic disorder: Many patients required more than 4 mg daily. Mean dosage in studies was 5 to 6 mg/day, with a maximum of 10 mg/day. Treatment may be initiated with 0.5 mg t.i.d. Depending on the response, dose may be increased every 3 or 4 days by up to 1 mg daily. After extended freedom from attacks, dosage should be carefully tapered by, at most, 0.5 mg every 3 days. Some patients may be resistant to all discontinuation regimens.

HOW SUPPLIED

XANAX Tablets are available in 0.25-mg, 0.5-mg, 1-mg, and 2-mg strengths.

CAUTION: FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.



**For anxiety
with associated
depressive symptoms**

TABLETS 0.5 MG
Xanax[®]
alprazolam [®] _{IV}

Upjohn

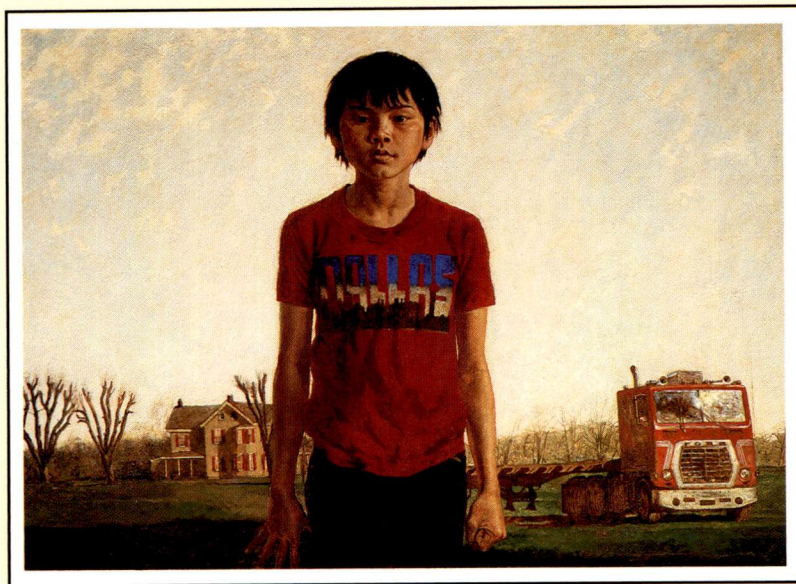
THE UPJOHN COMPANY
Kalamazoo, Michigan 49001, USA

Please see adjacent page for brief summary of prescribing information.

©1991 The Upjohn Company

Caring for the Uninsured and Underinsured

A Compendium From the Specialty Journals of the
American Medical Association



AMERICAN JOURNAL OF DISEASES OF CHILDREN

ARCHIVES OF DERMATOLOGY

ARCHIVES OF GENERAL PSYCHIATRY

ARCHIVES OF INTERNAL MEDICINE

ARCHIVES OF NEUROLOGY

ARCHIVES OF OPHTHALMOLOGY

ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY

ARCHIVES OF PATHOLOGY & LABORATORY MEDICINE

ARCHIVES OF SURGERY

American Medical Association

Physicians dedicated to the health of America



American Medical Association

Trustees

Lonnie R. Bristow, MD*; Rufus K. Broadaway, MD; Mary Ann Contogiannis, MD (Resident); Nancy W. Dickey, MD; Palma E. Formica, MD; William E. Jacott, MD; Audrey J. Ludwig (Student); Robert E. McAfee, MD* (Vice-Chairman); Joseph T. Painter, MD* (Chairman); Thomas R. Reardon, MD; Raymond Scalettar, MD*; Jerald R. Schenken, MD* (Secretary); P. John Seward, MD; Frank B. Walker, MD

*Executive Committee

Officers

President, C. John Tupper, MD*
President-Elect, John J. Ring, MD*
Immediate Past President, Alan R. Nelson, MD
Secretary-Treasurer, Jerald R. Schenken, MD*
Speaker, House of Delegates, John L. Clowe, MD
Vice-Speaker, House of Delegates, Daniel H. Johnson, Jr, MD

Executive Staff

Executive Vice President, James S. Todd, MD
Deputy Executive Vice President, Kenneth E. Monroe
Senior Vice President, Larry E. Joyce
Vice President, Publishing, Robert L. Kennett
Editor-in-Chief, Scientific Publications, George D. Lundberg, MD
Vice President, Special Projects, Steven V. Seekins, MPA
Director, Publication Production and Printing Division, Nawin Gupta, PhD

Publication Staff

Managing Editor and Director, AMA Specialty Journals, Michael D. Springer
Production Manager, Marlene M. Hinsch
Electronic Manager, Mary C. Steermann
Electronic Coordinator, Mary Ellen Johnston
Production Coordinator, Diane Darnell
Production Associate, Melinda Arcabos
Senior Electronic Layout Artist and Cover Design, Juliana K. Mills
Electronic Production Operators, Brenda Chandler and Debra Lucas
Proofreaders, Jennifer Reiling and Teresa Omiotek

Copyright © 1991 by the American Medical Association
All rights reserved

ISBN: 0-89970-417-4

Articles appearing in this issue compendium have appeared previously in the May 1991 issues of the following publications by the American Medical Association:

American Journal of Diseases of Children
Archives of Dermatology
Archives of General Psychiatry
Archives of Internal Medicine
Archives of Neurology
Archives of Ophthalmology
Archives of Otolaryngology-Head & Neck Surgery
Archives of Pathology & Laboratory Medicine
Archives of Surgery

Comments or Inquiries to:

Vice President for Special Projects
American Medical Association
515 North State Street
Chicago, Illinois 60610

PREFACE

Caring for the Uninsured and Underinsured

This volume, when taken with the May 15, 1991 edition of *The Journal of the American Medical Association*, forms the most definitive collection available to date of work on reform of the American health care system. We are proud the American Medical Association has expended the time, people, and financial resources to make this work available to everyone interested in this effort.

Certainly, as principal authors of the AMA proposal in the *JAMA* issue mentioned above, we believe the AMA's Health Access America proposal merits the serious consideration of the nation. But, more importantly, we believe the country needs to be committed to the serious process of dialogue and debate that will bring us to the system reform most believe must take place. The time for change is now and together these two volumes point to both the current conflicts and emerging consensus.

JAMES S. TODD, MD
Executive Vice-President
American Medical Association

STEVEN V. SEEKINS, MPA
Vice-President, Special Projects
American Medical Association

FOREWORD

Caring for the Uninsured and Underinsured

A Compendium From the Specialty Journals of the American Medical Association

A basic measure of the magnitude of any problem is the number of persons affected by it. By that criterion, the challenge facing the health care system of the United States is substantial. More than 40 million Americans are not part of our health care system at all, or are not provided for adequately. Identifying this fundamental, critical need and placing it at the top of our national agenda is a start, and has been a priority of the American Medical Association and other concerned parties. The next step is to seek a workable solution, and for that the primary agenda must be a frank, urgent, and wide-ranging debate of ideas and approaches. The time for that debate is now.

In May 1991 the ten journals of the American Medical Association—the weekly *JAMA* and the nine monthly specialty journals listed on the following page—all are dedicated to a common theme: caring for the American uninsured and underinsured. This collaborative effort has been a year in the making. It is unlikely that any other publisher or organization could have undertaken a project of this scope, since it relies so heavily on the cooperation and collegiality of 10 separate journals and 10 individual editors sharing a unanimity of focus and purpose, as well as many authors from multiple fields interested in this problem. Logistically it was a challenge as well, involving the acceptance and processing of 50 articles from the specialty journals (plus 16 of 82 submitted for *JAMA*), the review of many more, a common embargo date and coordinated media planning, and production and distribution of the journals to an aggregate worldwide audience of more than 1 million recipients.

This compendium is the fruit of that labor. Taken with the May 15, 1991 dedicated theme issue of *The Journal of the American Medical Association*, it provides a snapshot of where we are (and how far we have to go) in addressing the question of the uninsured and underinsured. Many

voices are represented in this single volume so as to give a comprehensive view of the issues, from many and varied perspectives: national, state, and county; urban and rural; office-based practice and academic research; national specialty societies and individuals; government agencies and private institutions and foundations; elderly patients and neonates; men, women, and children; from the widest-sweeping national proposals to the smallest 'points of light.'

A compelling cross-section of medicine is represented in this volume as well: surgical care; mental health; neurologic disorders; pediatric care; eye care; AIDS; diseases of the head and neck; cardiology; rheumatology; immunology; infectious diseases; and trauma care, to name only a few.

We are grateful to the superb editors of our family of journals who devoted their time, energy, and pages to this effort, and to all the authors whose perspectives are published in the journals and collected here, as well as to those many others who submitted proposals and papers that could not be included because of lack of space. The problem may not be resolved quickly, so we will continue to publish new ideas and solutions as they are developed. We hope that the May 1991 issues of the AMA journals and this volume will provide a starting point for a fresh national dialogue and serve as a source of reference material for the future on what may be the most fundamental health issue of our time: access to care for all Americans.

MICHAEL D. SPRINGER
Managing Editor and Director
Office of Specialty Journals

GEORGE D. LUNDBERG, MD
Editor-in-Chief
Scientific Publications

Specialty Journal Editors

Kenneth A. Arndt, MD

Archives of Dermatology
Beth Israel Hospital
330 Brookline Ave, LY 127-1
Boston, MA 02215

Byron J. Bailey, MD

Archives of Otolaryngology-Head & Neck Surgery
Substation 1, PO Box 103
Galveston, TX 77550

James E. Dalen, MD

Archives of Internal Medicine
2601 N Campbell Ave, Suite 202
Tucson, AZ 85719

Daniel X. Freedman, MD

Archives of General Psychiatry
UCLA Neuropsychiatric Institute
760 Westwood Plaza
Los Angeles, CA 90024

Vincent A. Fulginiti, MD

American Journal of Diseases of Children
Dean's Office, Room 1529
Tulane University, School of Medicine
1430 Tulane Ave
New Orleans, LA 70112

Morton F. Goldberg, MD

Archives of Ophthalmology
The Wilmer Institute
The Johns Hopkins Hospital
600 N Wolfe St
Baltimore, MD 21205

Robert J. Joynt, MD, PhD

Archives of Neurology
601 Elmwood Ave
Rochester, NY 14642

William W. McLendon, MD

Archives of Pathology & Laboratory Medicine
University of North Carolina
School of Medicine
Department of Pathology CB#7525
Chapel Hill, NC 27599-7525

Claude H. Organ, Jr, MD

Archives of Surgery
University of California-Davis, East Bay
1411 E 31st St
Oakland, CA 94602

Caring for the Uninsured and Underinsured

A Compendium From the Specialty Journals of the American Medical Association

Far From the Ideal: The Plight of Poor Children in the United States Vincent A. Fulginiti, MD	1
Youth Alienation as an Emerging Pediatric Health Care Issue James A. Farrow, MD	3
The Growing Neglect of American Children Harold M. Maurer, MD	5
Redoing the Health Care Quilt: Patches or Whole Cloth William W. Cleveland, MD	6
The Challenge of Care for the Poor Child Steve Kohl, MD	12
Poverty and the Health of American Children: Implications for Academic Pediatrics Richard B. Johnston, Jr, MD	14
Serving the Underserved Carol D. Berkowitz, MD	17
Improving Health Care Provision to Neonates in the United States Mildred T. Stahlman, MD	19
Child Abuse and Neglect: Critical First Steps in Response to a National Emergency: The Report of the US Advisory Board on Child Abuse and Neglect Richard D. Krugman, MD	22
A Survey of the Health of Homeless Children in Philadelphia Shelters Ruth M. Parker, MD; Leslie A. Rescorla, PhD; Jonathan A. Finkelstein, MD; Nathaniel Barnes, MD; John H. Holmes, MS; Paul D. Stolley, MD, MPH	25

Children in and of the Streets: Health, Social Policy, and the Homeless Young	32
James D. Wright, PhD	
Children's Services in an Era of Budget Deficits	36
Barbara B. Blum, Susan Blank	
What Will It Take to Fully Protect All American Children With Vaccines?	40
Alan R. Hinman, MD, MPH	
The Challenge of Caring for Indigent Children With Rheumatologic Diseases	45
Michael L. Miller, MD, Patience H. White, MD	
Poverty and Cardiac Disease in Children	50
Hugh D. Allen, MD; Kathryn A. Taubert, PhD; Richard J. Deckelbaum, MD; David Driscoll, MD; Ann Dunnigan, MD; Samuel S. Gidding, MD; Paul Herndon, MD; Rae-Ellen W. Kavey, MD; Charles Mullins, MD; A. Rebecca Snider, MD; William B. Strong, MD; Reginald Washington, MD	
Pediatric Acquired Immunodeficiency Syndrome, Poverty, and National Priorities	54
Margaret C. Heagarty, MD	
Pediatric Human Immunodeficiency Virus Infection and the Acquired Immunodeficiency Syndrome: A Health Care Crisis of Children and Families	56
Russell B. Van Dyke, MD	
New Initiatives in Adolescent Health Promotion	60
Arthur B. Elster, MD	
Care of the Poor and Underserved in America: Older Adolescents: A Group at Special Risk	62
Robert J. Haggerty, MD	
A Regional Pediatric Approach to the Epidemic of Social Ills Within Our Cities	65
Waldo E. Nelson, MD	
The Caring Program for Children: The Michigan Experience	67
Marianne Udow, MHSA; Vernon K. Smith, PhD; Margaret H. Mason, MHSA	
Health Care for Pregnant Women and Young Children	69
Richard E. Behrman, MD, Carol S. Larson, JD	
Improving Health Care for Underserved Infants, Children, and Adolescents: The Robert Wood Johnson Foundation's Experience	72
Michael P. Beachler	

The Challenge of Care for the Poor and Underserved in the United States : An American College of Obstetricians and Gynecologists Perspective on Access to Care for Underserved Women	76
Ezra C. Davidson, Jr, MD; Charles E. Gibbs, MD; Janet Chapin, MPH	
The American Academy of Pediatrics Response to the Growing Health Needs of Children	80
James E. Strain, MD	
Socioeconomic Status and Visual Impairment Among Urban Americans	84
James M. Tielsch, PhD; Alfred Sommer, MD; Joanne Katz, MS; Harry Quigley, MD; Sandi Ezrine, MS; and the Baltimore Eye Survey Research Group	
SightFirst: Lions Conquering Blindness	89
Julie Foreman, MS	
Indigent Patient Care—Then and Now	90
Loring W. Pratt, MD	
Indigent Care—Now	92
Neil O. Ward, MD	
Who Ought to Get Decent Health Care?	94
Ronald A. Carson, PhD	
The Canadian Health Care System	96
Patrick J. Doyle, MD	
Access to Trauma Care	97
Dale H. Rice, MD	
Preserving Access With Dignity for the Elderly: Tulsa's VIP Program	99
John G. Campbell, MD, Rollie E. Rhodes, Jr, MD	
Access to Care—The Problem for the Uninsured and Underinsured: The View From Washington	101
Jerome C. Goldstein, MD	
Access to Health Care in the United States	104
Byron J. Bailey, MD	
Caring for the Underserved: Health Insurance Coverage Is Not Enough	107
Matthew Menken, MD	

Access to Health Care: One Neurologist's Perspective	111
Michael P. Earnest, MD	
Access to Neurological Care for Minorities	116
Edgar J. Kenton, MD	
Freeze the Ocean	120
Robert J. Joynt, MD, PhD	
Poverty and Psychiatric Status: Longitudinal Evidence From the New Haven Epidemiologic Catchment Area Study	121
Martha Livingston Bruce, PhD, MPH; David T. Takeuchi, PhD; Philip J. Leaf, PhD	
Mental Health Needs of the Uninsured	127
Grayson Norquist, MD, MSPH, Kenneth Wells, MD, MPH	
The Dilemma of the Uninsured and Underinsured	132
Marvin Young, MD	
The Underinsured and the Uninsured	134
Maria D. Allo, MD	
Surgical Care for the Uninsured and Underinsured	135
Claude H. Organ, Jr, MD	
Caring for the Uninsured: The Oregon Experience	137
Richard Allen, MD	
Prioritization of Health Care Services: A Progress Report by the Oregon Health Services Commission	140
Harvey D. Klevit, MD; Alan C. Bates, DO; Tina Castanares, MD; E. Paul Kirk, MB; Paige R. Sipes-Metzler, DPA; Richard Wopat, MD	
Overcoming the Prejudice Against Establishing a National Health Care System	146
Richard J. Botelho, MD	
Universal Access to Health Care: A Comprehensive Tax-Based Approach	154
Jack A. Meyer, PhD; Sharon Silow-Carroll, MSW, MBA; Carl J. Sardegna, MBA	
Insuring the Uninsured Is Not Enough	160
James E. Dalen, MD, Jose Santiago, MD	
On the Care of the Poor and the Uninsured	163
Boris M. Astrachan, MD, Donald J. Scherl, MD	

Far From the Ideal

The Plight of Poor Children in the United States

Vincent A. Fulginiti, MD

The child on the cover of this month's issue of *AJDC* was visualized as an ideal by an unknown painter in colonial times. The child is beautiful, well nourished, placid, and obviously well cared for. This is the ideal that many think of when asked to picture our aspirations for our children. Unfortunately, in the United States today, we fall far short of providing that ideal for millions of infants, children, adolescents, and young adults. This issue of *AJDC* is devoted to exploring the dimensions of and reasons for the problems as well as offering potential corrective actions that might be applied to the plight of our underserved or unserved youth. We embarked on this issue as part of the family of American Medical Association journals' efforts to highlight what has become a national disgrace: 47 000 000 or more individuals are neglected at a time when many in the United States enjoy the highest level of health in the history of humanity. We hope that our readers will learn of this awful circumstance and, to the extent possible, take action locally, regionally, and nationally to effect some of our authors' remedial suggestions.

We embarked on the development of this issue by inviting commentaries from individual leaders in pediatrics, from spokespersons for our professional societies, and from directors of our major foundations and organizations that offer support and funding for programs that benefit children. We may not have invited all who could participate to do so, and some of those invited did not respond. However, a cross section of individuals did respond and covered all of the issues one might think of when considering the extent of the problems. We thank those who did so and offer our readers their comments.

We also received unsolicited manuscripts whose themes were consistent with the major intent of this issue of the journal. We have included those that seemed pertinent in our "Pediatric Forum" and "Original Article" departments. They form a unified whole with the solicited articles.

To highlight some of the generic issues common to many of the thematic articles in this issue, I offer the following observations:

1. The dimension of the problem is enormous. More than 37 million children live in poverty, an additional 10 million have no health insurance, and an unknown number have inadequate health care. Many of these children receive no care at all or only urgent care, in fragmented fashion, often for late-stage or even end-stage disease. For

most of this population, preventive services are nonexistent or inaccessible because of poverty, lack of knowledge, or failure of insurance programs to cover preventive services. The legacy of this neglect will be felt for many generations to come if we do not take urgent and emphatic action. We will have a host of unhealthy adults and lose significant numbers of otherwise contributing members of society. We also will lose the diversity of ethnicity that is desirable in our leadership ranks in all areas of society.

2. The reasons for the lack of medical care are legion; the most often cited in the reports in this issue are financial. Our national economic plight, with high national debt, diversion of funds from social programs to other areas of the budget, redistribution of federal support to states and cities (which cannot supply the redistributed services because of their own economic difficulties), and now, the added potential cost of the conflict in the Persian Gulf area, has resulted in inadequate resources for health-related programs. Non-health care social programs suffer from the same maldistribution of resources. As a result, poverty increases, homelessness skyrockets, and the causes of ill health multiply.

Apart from financial considerations, which are a major part of the problem, societal issues combine to deny adequate health care. For reasons that are unclear, children lack a voice in the halls of power, especially compared with other segments of our population, such as the elderly. Society voices the bland sentiment that children are our "most valuable resource" but does not protest when we do not ensure that this most valuable resource has an opportunity for a healthy life. In recent years, the American Academy of Pediatrics has become a voice heard in Congress and in other settings as an advocate for children and their needs. However, this is a relatively recent phenomenon and has not yet reached the magnitude of advocacy for the elderly. Strain's contribution¹ in this issue outlines the approach taken by the academy to influence adequate health planning for our youth.

Children whose parents have habits that result in congenital drug addiction and/or congenital infection with human immunodeficiency or hepatitis viruses receive a legacy over which they have no control. They are innocent victims of society's inability or lack of commitment to deal with these problems of their parents. Several contributors to this issue focus on the resulting ill health attendant on such neglect.

Another contributing factor is what I term the *disease of the month* mentality prevalent in allocating money to health programs. Many governmental and private programs are funded to satisfy the demands of potent advocacy groups

Accepted for publication February 1, 1991.

From the Dean's Office, Tulane University School of Medicine, New Orleans, La.

Reprinted from *AJDC* (1991;145:489-490).

for specific diseases. In other instances, a powerful individual, sometimes for personal reasons, supports a specific disease program. Added to this set of factors is advocacy by specific professional societies, each with its own agenda. Although this kind of advocacy, and subsequent funding, results in good care for some segments of the population, such specialized program development often substitutes for a more coherent, more widely applicable medical or preventive care program that could offer greater benefit for a larger proportion of our population. Cleveland² elaborates on this theme in his discussion of the "patchwork" vs "quilt" approach to health care.

Society also has neglected our adolescents, whose rising pregnancy rate results in increased prematurity, inadequate parenting, and reinforcement of poverty, ill health, and dangerous life-styles. A number of our authors have highlighted this critical area.

Members of society "bill and coo" over the infant born to parents in good financial condition, but ignore the minority infant in the intensive care unit who struggles first to exist and then to remain functionally intact. Members of society bemoan our high neonatal and infant mortality rates compared with other developed societies but do little to advocate for the resources that are needed to prevent prematurity and manage conditions leading to excessive morbidity and mortality. Commentators in this issue highlight the toll resulting from such inattention to this critical period in life.

3. Potential corrective actions are outlined for each of the areas covered by the articles in this issue. Some are relatively simple to accomplish, requiring some rededication of effort but little extra funding. Others will require

considerable funding and a change in our national priorities. However, most readers reach the overwhelming conclusion that we need a fundamental change in our national commitment. We need to behave as if children are really our most valuable resource and our future. Therefore, mothers must be afforded healthy pregnancies so newborns will be healthy and born at term, and children must be freed from preventable childhood diseases. They must enjoy normal growth and development and receive an effective education, which should include knowledge and skills needed to understand health and to effect behavioral changes that lead to prevention and avoidance of disease. Parents and children must also learn how to gain early and effective access to the health care system.

Rather than be discouraged by the scope of the problem, we suggest that readers use the data and recommendations in this issue to take action in individual practices, professional societies, medical schools, residency programs, and communities to become advocates for change at all levels of government. We need to take such actions now, not later. We can solve these problems with a unified will, but it will take a society that is willing to move itself from complacency to a new position of concern and action. We at *AJDC* believe we have taken a first step by presenting the articles in this issue; each of you can now take the necessary steps in the immediate future.

References

1. Strain JE. The American Academy of Pediatrics response to the growing health needs of children. *AJDC*. 1991;145:536-539.
2. Cleveland WW. Redoing the health care quilt: patches or whole cloth? *AJDC*. 1991;145:499-504.

Youth Alienation as an Emerging Pediatric Health Care Issue

James A. Farrow, MD

Many young people have withdrawn or are separated from the values of their society or family. These are our alienated youth. The number of adolescents without a defined role in modern society is growing.¹ The inability of children to find a meaningful and productive place in American society both contributes to and stems from the "new morbidities of youth," including early sexual activity, drug abuse, school failure, family violence, and the like. A dearth of descriptive information exists on this growing population of alienated adolescents, which includes runaways, teenaged prostitutes, street youth, school dropouts, and delinquents, to name but a few.² The problem of alienation during adolescence, which began to be of major sociological concern in the 1960s, today constitutes an emergent area of study for health care professionals.

These young people, because of forced or adopted destructive life-styles, are exposed more than most youth to both physical and emotional illness and to the untoward consequences of early sexual activity, such as pregnancy and exposure to sexually transmitted diseases, including acquired immunodeficiency syndrome.³ For example, more than half of all homeless adolescent girls become pregnant while on the streets.⁴ Likewise, those who live in inner cities and come from the underclass often migrate to environments where violence and bodily injury occur frequently and gang affiliation becomes inevitable. Opportunities therefore to reclaim these "wayward" youth become more difficult if the pattern of alienation is not recognized early.

While the largest group of alienated young people are of ethnic minority backgrounds, generally from the lower socioeconomic strata, their values and attitudes often remain similar to those of their families and culture.⁵ Equally alarming is the increasing number of alienated youth who come from middle-class America: runaways, street youth, punk rockers, delinquents, and school dropouts. Many of these youth are in conflict with their families and middle-class institutions because of a rejection of parental values or an attraction to subcultures that are perceived as more akin to themselves and supportive than their families, schools, or everyday peers. Few of these young people are running away from unfortunate or abusive home lives. Yet another group, the so-called throwaway kids, are asked by their families to leave at a young age. Many of these young people are depressed, have limited educations, and

are unemployable; thus, they are unlikely to become productive citizens.

The number of alienated youth in America is large. By conservative estimates, more than 1 million youth run away from home each year.⁶ Nationwide, more than 25% of all high school students drop out.⁷ More than 1/2 million adolescents are incarcerated in secure facilities each year.⁸ Estimates of the number of homeless teenagers on the street are rough at best. It is impossible to obtain accurate data for these large groups, in part because they do not congregate and many return home and to the streets in an unpredictable fashion. At a very young age these adolescents begin having difficulties fitting in, and the likelihood is high that as young adults they will have even more difficulty becoming independent, productive members of society.

Alienated youth are frequently outside the health care system and tend to remain there unless efforts are made to identify them and develop health services that are acceptable to them. The adoption of destructive life-styles by many of these youth contributes heavily to physical and psychological morbidity and to an alarmingly high mortality rate. Because health care is one of the more acceptable areas of interaction with these adolescents, some members of the health care community have been remarkably creative in their outreach and development of health services. A few model adolescent and young adult "street clinics" offer free, comprehensive health care services to this population. Those clinics that are affiliated with medical schools and specifically adolescent medicine provide many opportunities for pediatricians in training or in practice to be involved.

Even when the pediatrician is not involved in the regular care of homeless and alienated adolescents, motivated clinicians are aware of specialized resources in the community for this group. These resources include shelter services, free or easy-access adolescent clinics, counseling or support groups for gay and lesbian youth, adolescent chemical dependency treatment programs, and alternative schools. However, few cities have successfully developed comprehensive service programs and many of these components of care may not be available, or homeless and "emancipated" minors may not be eligible. Job training programs for runaways, juveniles involved in prostitution, and older street youth are becoming more prevalent in cities, but often cannot meet the great demand for services.⁹

Perhaps even more important is the pediatrician's advocacy role in promoting healthier outcomes before the alienation process progresses in adolescence. Pediatricians frequently see children who are beginning to have

Accepted for publication January 31, 1991.

From the Division of Adolescent Medicine, University of Washington, Seattle.

Reprinted from *AJDC* (1991;145:491-492).

problems associated with alienation. Alienation is often preceded by childhood emotional trauma and ongoing stress. Repeated stress-related illness, school absences, new behaviors stemming from depression, irritability, or anxiety may ultimately escalate into a situation during early adolescence that makes reconciliation between children and parents more difficult.

The pediatrician should take every opportunity during the earlier years to explore family relationship concerns and problem behaviors with children and parents. For older children and younger adolescents, the general psychosocial history should be discussed with the young person in a confidential setting. The degree to which the young person has begun to separate himself or herself from activities normal for his or her age should be assessed. Family relationships, leisure activities, the patient's association with a deviant peer group, school attendance and performance, alcohol and drug experience, sexual behaviors and concerns about sexual identity, and symptoms of depression and withdrawal are important areas to explore. Alienated youth have usually encountered problems in most of these areas.

Early intervention and referral, orchestrated by a caring pediatrician who recognizes the early signs of alienation, who has developed empathy for the experience of these young people and their families, and who knows community resources can be of great help in averting future adoption of destructive behaviors and life-styles.

While physicians as individual practitioners have a responsibility for providing anticipatory guidance to families and caring for these youth in clinical settings, a great deal more regional and national attention should be given to this large portion of American youth. Physicians can take an active role in developing community resources to

meet the needs of alienated youth. They can volunteer to serve on agency boards, committees, and groups to provide the expertise and understanding of a physician who is familiar with these youth and their health issues. The health perspective is important. We are at great risk of losing through apathy, illness, injury, and death many children who have a great deal more potential for productive adult lives than we often recognize.

References

1. Nightingale EO, Wolverton L. *Adolescent Rolelessness in Modern Society*. New York, NY: Carnegie Corporation of New York; 1988.
2. Resnick MD, Hibbard R. Chronic physical and social conditions of youth. Presented at the National Invitational Conference on Health Futures of Adolescents; April 2-5, 1986; Daytona Beach, Fla.
3. Kusserow RP. *HIV Infection Among Street Youth*. Washington, DC: Office of Inspector General; 1990. US Department of Health and Human Services publication OEI-01-90-00500.
4. Deisher RW, Farrow JA, Hope K, Litchfield C. The pregnant adolescent prostitute. *AJDC*. 1989;143:1162-1165.
5. Deisher RW, Farrow JA. Recognizing and dealing with alienated youth in clinical practice. *Pediatr Ann*. 1986;15:759-763.
6. National Network of Runaway and Youth Services. *AIDS Education: Programs for Out-of-School Youth Slowly Evolving*. Washington, DC: US General Accounting Office; May 1990. HRD-90-111.
7. Commission on Work, Family and Citizenship. *The Forgotten Half: Pathways to Success for America's Youth and Young Families*. New York, NY: William T. Grant Foundation; 1988.
8. Stone D. Juvenile crime rate: myth vs reality. *Youth Law News*. 1982;2:1-2.
9. Deisher RW. Our alienated youth. Presented at the National Invitational Conference on Health Futures of Adolescents; April 2-5, 1986; Daytona Beach, Fla.

The Growing Neglect of American Children

Harold M. Maurer, MD

America is not doing enough to meet the health care needs of poor children. Unless we face up to this growing neglect, our nation's future is in doubt. Although we frequently hear that "children are our greatest national resource," we see little evidence to indicate that our policy makers believe it or are willing to act to prevent the terrible waste in human resources as a result of poverty. The money spent on health care for the elderly in America is 15 times that spent on health care for children.¹ Although children represent 50% of the Medicaid population, they receive less than 20% of the money spent for health services.¹ Furthermore, Medicaid reimbursement for health services for children is so low that few physicians in private practice can afford to see Medicaid patients.

The facts regarding impoverished children are staggering. They are cause for concern regarding the values and priorities of our nation. The data speak for themselves.

1. Thirty-seven million American children live in poverty, 9 to 12 million have no health insurance, and millions of others have less than adequate health insurance.² Children are the poorest group in society.

2. One in four to six pregnant women lacks health insurance for maternity care, and one in four does not receive prenatal care during the first trimester.²

3. The infant mortality rate is higher in America than in some third-world countries. In 1989, there were 9.7 deaths per 1000 live births; it was twice that for blacks.³

4. Nearly 5000 low-birth-weight babies are born every week in America.¹ Low birth weight, which, in many instances, is preventable through improved prenatal care for the mother, places these babies at high risk for serious illness and handicapping conditions.¹

5. Each year, as many as 1 million teenagers become pregnant, and 18% of newborn infants in some city hospitals are victims of transplacental exposure to alcohol, crack, and other hard drugs (*The New York Times Magazine*, September 9, 1990:41).

6. One third of poor children are not immunized by the second year of life against measles, mumps, and rubella.² Ten percent of children younger than 4 years have not seen a physician in a year.² Poor children tend to be taken episodically to costly city or county hospital emergency departments for care, often late in the course of an illness. Because poor children lack a "medical home," they often do not receive continuing care, anticipatory guidance, or counseling, which could eliminate preventable health problems.

America must come to grips with these devastating but correctable problems. We have the knowledge to prevent

illness, promote health, and save lives. We must provide access to health and social services for all pregnant women and children through the provision of universal health insurance. The plan proposed by the American Academy of Pediatrics meets this objective, and this plan or an equivalent one should be enacted into law. In addition, we must provide a "medical home" for every pregnant woman and child so that primary health and continuity of care can be provided to promote health. Widening medical coverage alone to cover more pregnant women may not be the answer. Women must be able to enroll before they become pregnant, or else they may become pregnant months before they sign up. The application process also needs to be accelerated and health care should be provided during the processing of the application. We should support all programs, agencies, policies, and strategies that guarantee the full spectrum of health care services for these underserved.

Expanding access to health care will also affect health manpower needs. More primary care physicians will be required to care for the population of pregnant women and children who are currently underserved, or whose needs are not being met. Resident physician education should include a curriculum segment that deals with the specific health care needs of the poor.⁴ Moreover, incentives such as loan forgiveness should be created to attract residents to pursue careers in serving the poor.

During the next century, we can expect considerable change in the demographics of our nation. The current migration of people throughout the world is greater than ever before. The distinction between minority and majority groups will fade. In the next century minority groups will become the majority of the population in the United States. It is essential that we recognize this changing environment and begin to provide access to health care for poor women who do not receive prenatal care and for poor children in our society. We must ensure that every child has the opportunity to grow up healthy, gain an education, and become economically productive.

The following are the members of the Executive Committee of the Association of Medical School Pediatric Department Chairmen Inc: Robert P. Kelch, MD, president; Ralph Feigin, MD, president-elect; Michael A. Simmons, MD, secretary-treasurer; George W. Brumley, MD; Robert A. Hoekelman, MD; Harold M. Maurer, MD; Donald N. Mederis, Jr, MD; Alfred E. Michael, MD; Carol F. Phillips, MD; Irving Schulman, MD; James A. Stockman III, MD.

References

1. *Myth vs Reality Fact Sheet*. Washington DC: American Academy of Pediatrics Department of Government Liaison; 1990.
2. *A Promise to Keep: A Conference on Cross-National Comparisons of Child Health*. Sponsored by the American Academy of Pediatrics. March 17-19, 1990.
3. Saving infants lives. *Faulkner & Gray's Medicine and Health*. 1990;44:36.
4. *Educating Pediatric Residents to Provide Health Care to Underserved Children*. McLean, Va: Ambulatory Pediatric Association; 1990.

Accepted for publication January 22, 1991.

From the Association of Medical School Pediatric Department Chairmen Inc, Salt Lake City, Utah, and the Department of Pediatrics, Children's Medical Center, Medical College of Virginia, Virginia Commonwealth University, Richmond.

Reprinted from *AJDC* (1991; 145:540-541).

Redoing the Health Care Quilt

Patches or Whole Cloth?

William W. Cleveland, MD

The current health care system of the United States, like a quilt that is tattered and full of holes, badly needs attention. The question is whether we should repair it with patches or replace it with a new quilt of whole cloth. That the system needs fixing is evident; the deficiencies have been described by abundant commentaries. The major deficiencies include those cited below.

The Uninsured.—An estimated 37 million people in the United States do not have health insurance. Of these, about 12 million are children; another major segment comprises pregnant women. These numbers are estimated to have increased approximately 30% in the last decade. This reflects lack of employee coverage, particularly in small businesses, and a high rate of job turnover. It also reflects an inadequate Medicaid program that varies by state but that generally leaves a significant fraction of indigent families uncovered. The problem of uninsured children has been extensively reviewed by Oberg.¹

Expanding Health Care Costs and an Apparent Lack of Efficiency.—If infant mortality rate is an acceptable indicator of maternal and child health, the comparison of rates in the United States with those of other nations relative to expenditure provides a discouraging picture indeed (Fig 1).² Our per capita medical expenditure is the highest in the world, but we rank 21st in infant mortality rates. When infant mortality rates are compared in terms of percentage of gross national product spent on health care, the result is the same (Fig 2). One factor to be considered is whether the US government is spending its money in the right places. For example, if infant mortality rates among developed nations are compared with the percentage of health care dollars spent for public health, our position is reversed—the United States spends the lowest percentage for public health and is still 21st in mortality rate (Fig 3).

A Burdensome Bureaucracy.—Costs of administering US health care programs are staggering. Of the approximately 11.5% of the gross national product expended, an estimated 2.6% funds the bureaucracy. For the physician, penetrating the administrative barriers of either governmental agencies or insurance companies to render service

charges is a familiar problem. For the patient, dealing with these groups is perhaps even more difficult. The bureaucracy of health care appears to be in a state of chronic and self-sustained hyperplasia.

An Inadequate Medicaid Program.—This system is federally mandated but managed through varying policies by the states. These variances include the standards for inclusion in the program, the scope of benefits provided, the amount of public funds allocated, and rates of provider reimbursement. Financial criteria for eligibility vary widely, but in most states a significant portion of the indigent population of children and pregnant women is not covered. For persons eligible, the mechanisms for registration are often cumbersome and patients with limited social resources may not be able to gain access to the system. A further deficiency is that payment to providers may be so low as to offer no incentive to render services. In some states, payments for preventive care, including well-child visits, are so low that they do not cover physicians' overhead, much less reimburse them for professional services.

A Troubled Health Insurance Industry.—More than 1500 health plans in this country compete for coverage in an entrepreneurial system. Each maintains its separate administration; each has its own policies as to eligibility and coverage and each is a for-profit operation. Providers must deal with a variety of provisions and regulations that significantly contribute to costs of delivering care. Insurance companies also must spend large amounts of money on administrative costs—approximately 12% of premiums.

Lack of Emphasis on Prevention.—The insurance industry does not embrace preventive medicine as its goal. Pediatricians in Florida were able to promote legislation mandating well-child care provision by insurers; this was accomplished with great travail and with much resistance by the industry. As previously noted, an inordinately low percentage of our health care funds goes to public health agencies. Medicaid struggles to provide treatment of illness with incomplete success, and little is left for preventive care.

Litigious Factors Expanding Costs.—Physicians who practice in areas where malpractice suits flourish and attorneys become rich cannot help but be influenced by this threat in making clinical decisions. The remote chance that a child not growing well has a hypothalamic lesion not clinically evident provokes the performance of magnetic res-

Accepted for publication January 11, 1991.
From the Department of Pediatrics, School of Medicine, University of Miami (Fla).
Reprinted from *AJDC* (1991;45:499-504).

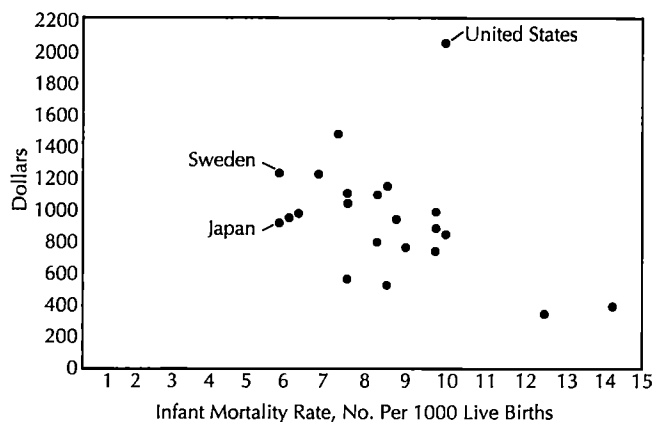


Fig 1.—Per capita health expenditures and infant mortality rates in 1987.

onance imaging, which currently costs \$1200. (Why this procedure should cost \$1200 or growth hormone should cost \$50/mg is also of interest, but that is the subject of another essay.) And so it goes—the expansion of these ultraconservative decisions contributes to health care costs, to say nothing of its contribution to the costs of malpractice insurance. The many holes in the ragged quilt are evident. All agree that repairs are urgently needed. The question remains as to the best approach. Many alternatives have been proposed—patches and new quilts of whole cloth.

THE PATCHES

Various proposals have been made at several levels to patch the holes. The essential features of some of these are summarized below. The review is intended to be illustrative but not all-inclusive.

Medicaid Expansion and Reform.—This is a part of several proposals listed below, but has been specifically addressed by the Health Policy Agenda for the American People.^{3,4} Eight major reforms were recommended by the Ad Hoc Committee on Medicaid and are as follows:

1. The Medicaid program should be governed by national standards and goals.
2. The categorical link of Medicaid eligibility to public cash assistance (welfare) programs should be broken; income eligibility for the program should be set at no less than the federal poverty level.
3. All states should be mandated to adopt a Medically Needy program with "spend down" eligibility provisions. Asset testing should be an acceptable eligibility requirement only through the Medically Needy provisions. "Medically needy" persons are those whose incomes exceed the Medicaid eligibility level but who have been impoverished by catastrophic medical bills.
4. A standard benefit package should be provided by each state and federally mandated. It should include physician services, inpatient and outpatient hospital services, laboratory and roentgenogram services, prescription drugs, institutional care for the elderly and the physically or mentally disabled, dental services, early and periodic health screenings, diagnostic and treatment services, family planning services, home health and personal care services, and other medically necessary professional services.
5. Medicaid expansion should include measures to promote cost-effective provision of services.

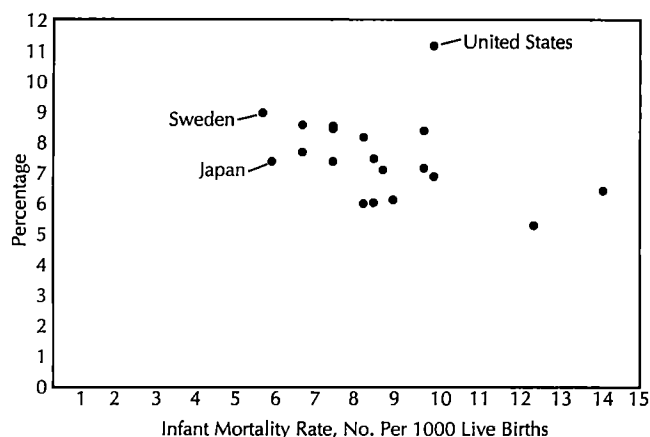


Fig 2.—Infant mortality rates and public health expenditures as percentages of all health expenditures in 1987.

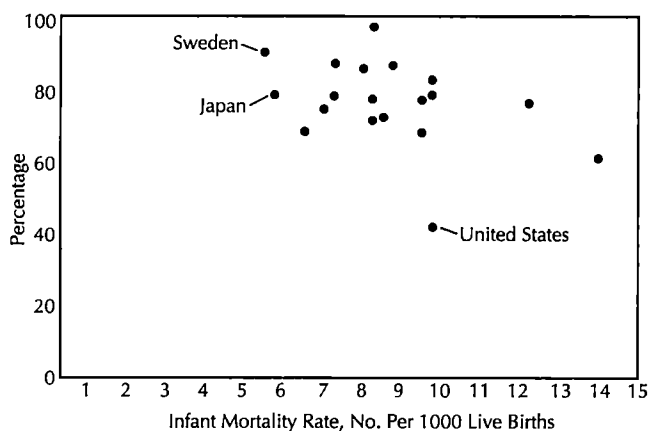


Fig 3.—Infant mortality rates and health expenditures as percentages of gross national product in 1987.

6. Medicaid expansion should include policies and incentives to encourage broader health care provider participation.

7. A greater burden of the fiscal impact of eligibility expansion should be borne by the federal government, and the federal formula governing reimbursement to states should be revised to correct for tax-burden inequities.

8. Long-term care services should be continued under Medicaid or through a structurally improved program.

Basic Health For All Americans Act.—Proposed by Kennedy⁵ in 1987, the act recommends major expansion of employer coverage for health care and mandates a minimum level of health benefits to be provided, including hospital and physician care, preventive testing, prenatal testing, and well-baby care.

Universal Maternal And Child Health Program.—Proposed by Oberg,¹ this would ensure universal and equitable access to health services by pregnant women and children independent of age, income, family composition, or employment. Coverage would be provided for preventive as well as acute and catastrophic services.

Recommendations of the Pepper Commission.—The commission's recommendations^{6,7} include insurance reforms by which income-based cost sharing of premiums by employers and a public plan guaranteeing health care coverage for all workers would be implemented. Ultimately, this plan would provide coverage for all children.

Insurance reforms would include coverage of primary and preventive care, elimination of exclusions because of pre-existing conditions, and elimination of coinsurance payments by consumers for prenatal and well-child care. The commission also recommended Medicaid reforms (including physician reimbursement for obstetric and pediatric care), ultimate replacement of Medicaid with a new federal program expanding access and payment according to Medicare rules, a quality assurance strategy that would include reform of the medical malpractice system, and cost containment measures.

American Academy of Pediatrics National Child Health Policy.—This policy⁸ includes health care coverage for all children and adolescents through age 21 years and mandates employer-based coverage or coverage by private insurance companies contracted by the state. The policy also calls for state health care funding (including funding of Medicaid expenditures), state and federal insurance premiums, an employer payroll tax for those employers who choose not to cover pregnant women and children, and methods of ensuring adequate provider reimbursement.

HR 4280 Health Insurance for Children and Mothers Act of 1990.—This act⁹ requires health insurance for pregnant women and children, mandates comprehensive benefits, calls for elimination of financial barriers to health care (development of a one-tier health care system), recommends that Medicaid dollars be refocused in a more efficient and effective program, emphasizes preventive services (including immunizations, and prenatal and well-child care), and directs that payroll tax be increased to match current Medicare tax paid by employer and employees.

A Consumer Choice Health Plan for Universal Health Insurance.—The proposal¹⁰ states that "To remedy the deprivation, we propose that everyone not covered by Medicare, Medicaid, or some other public program be enabled to buy affordable coverage, either through their employers or through a 'public sponsor.' To attack the excess, we propose a strategy of managed competition in which collective agents, called sponsors, such as the Health Care Financing Administration and large employers, contract with competing health plans and manage a process of informed cost-conscious consumer choice that requires providers who deliver high-quality care economically."

State Programs.—These programs include Massachusetts legislation designed "to make health security available to all citizens of the Commonwealth and to improve hospital financing." This legislation would create a Department of Medical Security that contracts with health plans to make coverage available to small businesses and unsponsored individuals. It proposes a tax on all employers of five or more workers.¹¹ The New York State Department of Health has developed a program called Universal New York Health Care, or UNY-CARE.¹² It would retain existing payers, including employer-based insurance coverage, but would combine them in a one-payer framework. This one payer would be the only resource for most services and would negotiate reimbursement rates, hopefully to exercise some cost controls.

Rationing Health Services.—Oregon legislation proposes altering Medicaid coverage to provide services based on a "net benefit" concept.¹³ This involves priori-

tizing medical services on the basis of cost and benefit to the overall public. A list of such priorities has been generated. Different priorities have been established for different age groups. High priorities are given to family planning, prenatal care (including nutritional care), childhood immunizations, labor and delivery services, and the treatment of acute illness. Low-priority items include infertility services, plastic surgery, routine dental care for adults, and most transplantations. These priorities are established by a Health Services Commission consisting of five physicians, a public health nurse, a social worker, and four consumers. The basic principle is expansion of numbers served by restriction of services provided. Thus far it proposes rationing services only to those served by Medicaid.

Rationing Medical Progress.—Callahan¹⁴ describes his proposal as follows: "In any case, we must be prepared to ration medical progress and in particular to forego potentially beneficial advances in the application and development of new techniques. I am not proposing a diminution of efforts to extend our store of theoretical biologic and medical knowledge. A strong commitment to basic biomedical research remains an attractive and desirable goal. That commitment is not incompatible, however, with several insistent requirements: (1) that clinical applications be subjected to stringent technological assessments before dissemination; (2) that the social and economic standards for the assessment be biased toward restrictiveness ('straight is the gate and narrow the way' might be a pertinent maxim here); and (3) that it is understood and accepted that some, perhaps many, beneficial applications will have to be passed over on grounds of cost and other, more pressing social priorities."

Rationing Health Care According to Age.—Levensky¹⁵ summarized these proposals as follows: "Why is it acceptable to propose limits on health care for the elderly, in contrast to the obvious unacceptability of such a proposal applied to other groups and classes of citizens? A number of philosophers and medical ethicists, prominent among them Callahan, Daniels, and Veatch, have published carefully formulated arguments favoring the use of age as a criterion for rationing health care. Although the details of their various arguments differ, the essential philosophical underpinnings are quite similar. They argue that limits on health care for the elderly are justifiable because each citizen, throughout a lifetime, would benefit if funds now used to extend life at its end were redirected to earlier stages of life. They envision the national health care budget equitably distributed among all citizens. Each person would be entitled to a fair share of national health care expenditures as a personal lifetime 'health care budget.' "

THE QUILTS

The Canadian Health Care System

Much discussion of adopting a variant of the Canadian system has been heard.¹⁶ In Canada, one national health program is administered by the provinces, and universal coverage for all citizens is provided regardless of age, health status, or financial means.

All medical costs, with no copayments or deductibles and including costs of long-term stays in health care facilities, are covered. Services include care by physicians in offices, in hospitals, and at home. Also covered are diagnosis and treatment of illness and injury (including and drugs prenatal and postnatal obstetrical care); laboratory,

radiologic, and other ancillary services; radiotherapy; and home dialysis. Most of the provinces also provide land and air ambulance services. Private or semiprivate hospital accommodations are not covered by the plan but may be financed through commercial insurers with premiums paid by employers. (These plans may not, however, offer benefits provided by the provincial plans.)

Payments to providers include fee-for-service reimbursement of physicians according to a schedule negotiated between organized medicine and provincial government. Some provinces have capitation systems. Patients can choose any physician. Extra billing by physicians is barred. Hospitals are paid an annual global sum for provision of services, which is similarly negotiated. In Canada, centralized government controls are exercised over major forms of technology and capital spending, with an effort to regionalize highly technologic services. The system is financed by payment of premiums by employers and individuals. Funding is also provided by the provincial and federal governments through general revenues. Participants older than age 65 years pay no premiums; individuals or families lacking resources to pay also are not charged.

Comprehensive Health Care for All Americans Act (the Claude Pepper Comprehensive Health Care Act)

This comprehensive plan includes many features of the Canadian system.¹⁷ Its principal elements are as follows:

Eligibility.—All residents of the United States who are citizens, nationals, or lawful resident aliens may enroll. The enrollee may choose among qualified health plans as approved by the state of residency.

Administration.—The act would establish a National Comprehensive Health Care (CHC) Board to which each state would submit a plan for its CHC program. To be approved, the state plan must provide for (among other things): adequate financing, freedom of choice among qualified health plans by enrollees, effective cost containment measures, adequate administration (including establishment of a public advisory boards), responsive quality control mechanisms, and organization of a state commission to reduce excess hospital beds. The National CHC Board would establish a commission to provide advice regarding technology development and effectiveness and to recommend such technologies for inclusion as covered health services. Each state CHC program would approve qualified health plans for inclusion based on defined criteria. The number might be limited, except for health maintenance organizations.

Financing.—The federal CHC program would make a per capita contribution to each state annually according to defined criteria for support of the state plan. The state CHC program would generate funds from general revenues, earmarked taxes, sales taxes, employer and employee health insurance premiums, and cost sharing. Services for low-income groups, pregnant women, and well-child care might be exempt from premiums or cost sharing.

Reimbursement.—The CHC program would include payment of institutions according to a biennial budget plan and to physicians according to payment schedules negotiated with medical organizations and based on a national relative value scale. Alternate methods such as capitation, annual salary, and hourly payments might be ap-

proved with some restrictions.

Benefits.—The plan provides very broad coverage, including physicians' and other professional medical services, inpatient and outpatient hospital care, diagnostic and screening tests, prenatal and well-baby care, mental health services, long-term care, and hospice services. Preventive services would include basic immunizations, prenatal and postnatal care, well-child care (including periodic physical examinations and hearing and vision screening until age 23 years), Papanicolaou smears, and mammographic examinations. This legislation also proposes extensive programs for long-term and geriatric care and authorization for support of research of acquired immunodeficiency syndrome, hypertension, sickle cell anemia, infant mortality, and breast cancer.

Mediplan

This proposal mandates a broad health care program¹⁸ by which all US residents would be enrolled and issued a Mediplan card entitling them to care. Subsequently, residents would be enrolled at birth. Children, pregnant women, and low-income groups particularly are identified to receive services. Benefits would include those provided currently by Medicare and special preventive health services for women and children (including well-child care and pregnancy-related services). Providers would be paid according to a resource-based relative value scale. Physicians would be required to accept a Mediplan rate and charge no additional fees. Mediplan includes a global obstetrical fee and a bonus for prenatal care. Children, pregnant women, and low-income groups would be exempt from the \$500 annual deductible. Financing of Mediplan would be generated from income tax, employer contributions, and income-related employer premiums. Deductibles, copayments, and co-insurance would be limited to \$2500 per year.

A National Health Program for the United States: A Physician's Proposal

Himmelstein et al¹⁹ and Woolhandler and Himmelstein,²⁰ along with the Writing Committee of the Working Group on Program Design representing Physicians for a National Health Program, describe a comprehensive health plan by which everyone would be covered by one public plan and all alternative insurance coverage, copayments, and deductibles would be eliminated. All medical services, including those to treat acute problems and problems requiring long-term and rehabilitative care, would be covered. Prevention and public health programs would be covered, as would dental services and occupational therapy. A lump-sum budget would be negotiated annually with hospitals for patient services. Improvements, expansion, and major capital services would be funded by independent appropriations. Three options would be available: fee-for-service, salaried positions in institutions receiving global budgets, and per capita payments to group practices or health maintenance organizations. Fee schedules would be negotiated by a medical organization, and extra billing would be limited to uncovered services such as cosmetic surgery. All funding sources currently used would continue during a transitional period (including insurance premiums, Medicaid, Medicare, and employer contributions), but all would flow through a single

payer, the national health plan. Private health insurance would be phased out over 3 years, and general tax revenues would be developed based on income or some other progressive tax.

COMMENT

Most would agree that our health care system needs urgent attention. There are obviously many options. The continuing flow of thoughtful commentaries on the problem in our medical journals²¹⁻³⁴ reflects the intense interest of health care professionals. Various polls have demonstrated that Americans favor a major overhaul of the health care system, but their dissatisfaction has apparently not reached a level sufficient to bring pressure on politicians, which is ultimately needed if change is to occur. In contrast, powerful elements in the health care industry exert major influence in determining changes or lack thereof. As Levey and Hill²¹ put it: "The voices now raised to support national health care will not produce universal health insurance soon Americans lack a necessary level of discontent with our health care system, agreement on a widely endorsed program of universal health insurance, and the political stamina to drive legislation through Congress." However, perhaps enlightened leadership in the medical community can stimulate the necessary action in both lay and professional circles. Relman,²² in a valuable discussion of the subject, reviews the options and concludes: "In my view, nothing short of a comprehensive plan which includes improved technology assessments and malpractice reform as well as other reforms of medical practice is likely to achieve the goals of universal access, cost containment and preservation of quality that everyone seems to want Now is the time for our profession to make common cause with government and with the major private payers in seeking solutions to a pressing social problem that is not going to solve itself."

If political and other realities limit us to patches, even if in the process of shopping for a new quilt, then we should get on with it. The most practical of these is modification of the Medicaid program: extended coverage for indigent children and pregnant women; increased benefits provided, with emphasis on preventive care; and payments to providers that are adequate to attract their services. These changes can be relatively simply made by federal and state governments. This is an urgently needed first step that can be taken while plans for broader coverage are being developed. Medicaid expansion in one or another form is part of several broader recommendations, including the legislation proposed by Stark,⁸ the American Academy of Pediatrics,⁹ and, at least temporarily, the Pepper Commission.^{5,6} If we pursue patchwork remedies, these broader proposals should be evaluated as to overall benefit and political reality.

A modification of the Medicaid patch proposed by the state of Oregon would ration services based on net benefit. (This is in contrast to our present system of rationing care by limiting populations served.) This proposal has generated much and varied reaction.^{13,23,24} Variations on this idea causing even more violent reactions have included Callahan's proposal¹⁴ to ration new technology and a scheme to ration services based on age, restricting access to some benefits by the elderly. The Canadian system controls provision of some services by having the health plan approve implementation of new technology in clinical

practice and by controlling capital expenditures by institutions. The chances of implementing any of these proposals seem slim.²⁴

If we are to consider a new quilt, how should it be sewn? The Canadian system has been much discussed²⁵⁻²⁸ and has many advantages: universal coverage under one plan; coverage of all reasonable benefits; one system of management that simplifies procedures for patients, physicians, and hospitals; free choice of physicians; emphasis on the role of the primary care practitioner; regulated application of new technology that encourages regionalization; controlled capital expenditures; fee-for-service physician reimbursement; and controlled hospital costs through development of an annual, realistically-negotiated budget. Studies comparing the Canadian and American health care systems^{27,28} have emphasized reduced administrative costs in Canada, costs that contribute to premiums for patients and to overhead for physicians in the United States. The cost of health care in the United States is approximately 11% of the gross national product, while in Canada it is approximately 8%, despite the latter's broader coverage. The difference has been attributed largely to our higher administrative costs, higher payments to physicians, and hospital costs. Concerns about the Canadian system include its larger role of government and the potential of increased regulation, yet there is apparently more regulation of clinical practice in this country than in Canada. Evans et al²⁸ point out that "In the United States corporate competitors or employers may turn out to be more ruthless than public regulators." Another concern, not so regularly expressed, is the impact on physician's incomes. A comparison of fee costs in 1985²⁷ revealed the following ratios for some services.

Service	Fee Ratio, United States to Canada
Surgery	3.21:1
Anesthesiology	3.73:1
Radiology	3.50:1
Office visit	1.56:1
Hospital visit	4.77:1

A comparison of net physician incomes (US physicians vs Canadian physicians) produced a ratio of 1.35:1, and, according to one report, after adjustment for costs of resources (including liability insurance) the ratio became 1.30:1.¹⁶ In 1984, the mean net income of physicians (before taxes) in Ontario was \$160 000 per year for specialists and approximately \$112 000 for general practitioners. Another report²⁷ lists net income for office-based physicians in Canada in 1985 as \$73 607, compared with \$112 109 in the United States. Interestingly, this report states that payments to physicians (before income taxes) represent 52% of the gross income in the United States and 66% in Canada.

The United States needs a health care system that will provide access to coverage by all citizens. It must provide services of broad scope and high quality, and it must do so with emphasis on measures for cost containment and preventive health. The evidence seems compelling that this can be done only by the institution of a new system. As Iglehart²⁵ puts it, "Muddling through, as we are now

doing, is not a prescription for the ages, nor is it a policy that allows the United States to stand tall." Of the options, a variant of the Canadian system appears most attractive. The program described by Himmelstein et al^{19,20} embraces many of the desirable features and would be a new, first-class quilt, but quilts imply bedfellows, and it is desirable, almost essential, that bedfellows be compatible. There are a number of large fellows in the bed, including the health insurance industry, hospitals, employers, government, politicians, and the public. The chances of compatibility under a new quilt seem remote, particularly when some bedfellows may get kicked out of bed. Nevertheless, it is imperative that we keep trying and that the medical profession lead the efforts to ultimately find a new quilt rather than to continue patching the old one.

References

1. Oberg CN. Medically uninsured children in the United States: a challenge to public policy. *Pediatrics*. 1990;85:824-832.
2. Wegman ME. Annual summary of vital statistics. *Pediatrics*. 1989;84:943-956.
3. Boyle JD. Health policy agenda for the American people. *JAMA*. 1987;257:1199-1210.
4. Tallon JR. A health policy agenda proposal for including the poor. *JAMA*. 1989;261:1044.
5. Basic Health for All Americans Act of 1987. S768.
6. Rockefeller JD. Access to Health Care and Long Term Care for all Americans: Preliminary Recommendations to the 101st Congress by the Pepper Commission. March 2, 1990.
7. Rockefeller JD. The Pepper Commission report on comprehensive health care. *N Engl J Med*. 1990;323:1005-1007.
8. Health Insurance for Children and Mothers Act of 1990. HR 4280.
9. Harvey B. Toward a national child health policy. *JAMA*. 1990;264:252-253.
10. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s: universal health insurance IHA system designed to promote quality and economy. *N Engl J Med*. 1989;320:29-37, 94-101.
11. Sager A, Hiam P, Socolar D. *Promise and Performance: First Monitoring Report on 'An Act to Make Health Security Available to All Citizens of the Commonwealth and to Improve Hospital Financing.'* Boston, Mass: Boston University School of Public Health; 1989.
12. Beauchamp DE, Rouse RL. Universal New York health care: a single payer strategy linking cost control and universal access. *N Engl J Med*. 1990;323:640-644.
13. Relman AS. Is rationing inevitable? *N Engl J Med*. 1990;322:1809-1810.
14. Callahan D. Rationing medical progress: the way to affordable health care. *N Engl J Med*. 1990;322:1810-1813.
15. Levensky NG. Age as a criterion for rationing health care. *N Engl J Med*. 1990;322:1813-1815.
16. Iglehart JK. Canada's health care system. *N Engl J Med*. 1986;315:202-208, 778-784, 1623-1628.
17. The Comprehensive Health Care for All Americans Act of 1990. HR 4253.
18. Mediplan Act of 1990. HR 5300.
19. Himmelstein DU, Woolhandler S, The Writing Committee of the Working Group on Program Design. A national health program for the United States: a physician's proposal. *N Engl J Med*. 1989;320:102-108.
20. Woolhandler S, Himmelstein DU. A national health program: northern light at the end of the tunnel. *JAMA*. 1989;262:2136-2137.
21. Levey S, Hill J. National health insurance: the triumph of equivocation. *N Engl J Med*. 1989;321:1750-1753.
22. Relman AS. Universal health insurance: its time has come. *N Engl J Med*. 1989;320:117-118.
23. Russell LB. Some of the tough decisions required by a national health plan. *Science*. 1989;246:892-896.
24. Relman AS. The trouble with rationing. *N Engl J Med*. 1990;323:911-913.
25. Iglehart JK. The United States looks at Canadian Health Care. *N Engl J Med*. 1989;321:1767-1772.
26. Linton AL. The Canadian health care system: a Canadian physician's perspective. *N Engl J Med*. 1990;322:197-199.
27. Fuchs VR, Hahn JS. How does Canada do it?: a comparison of expenditures for physician's services in the United States and Canada. *N Engl J Med*. 1990;323:884-890.
28. Evans RG, Lomas J, Rarer ML, et al. Controlling health expenditures: the Canadian reality. *N Engl J Med*. 1989;320:571-577.
29. Ginzberg E. Health care reform: why so slow? *N Engl J Med*. 1990;322:1464-1465.
30. Schorr AL. Job turnover: a problem with employer-based health care. *N Engl J Med*. 1990;323:543-545.
31. Shortell SM, McNerney WJ. Criteria and guidelines for reforming the health care system. *N Engl J Med*. 1990;322:463-466.
32. Kinzer DM. Universal entitlement to health care: can we get there from here? *N Engl J Med*. 1990;322:467-470.
33. Relman AS. Reforming the health care system. *N Engl J Med*. 1990;323:991-992.
34. Newachek PW. Improving access to health care for children, youth and pregnant women. *Pediatrics*. 1990;86:626-635.

The Challenge of Care for the Poor Child

The Research Agenda

Steve Kohl, MD

The Society for Pediatric Research is a diverse group of scientists bonded by the common interest in research dealing with problems of children. Many of the society's members have very strong feelings regarding the social and political problems of health care for the poor and, in particular, health care for poor children. Nevertheless, it is not in the usual scope of our organization to comment as a group on these problems or even to claim particular expertise in this area. Indeed, other segments of the pediatric community have been asked to address these issues, and their efforts can be found in this issue.

As a research-oriented organization, the Society for Pediatric Research can make cogent comments and suggestions concerning the role of investigation in this problem area. In this regard, one must view research in its broadest sense; that is, research on the molecular level at one end to research on the societal level at the other end. There is a clear and pressing role for research methods in identifying the problems facing the poor and in arriving at rational solutions to them on all levels.

To enumerate many of the health problems particularly facing poor children in this country would surely be redundant. I will outline only a few that are of markedly increased incidence in poor children, take a deadly toll, and are obviously amenable to investigation. These include prematurity, perinatal infections (including acquired immunodeficiency syndrome), substance abuse effect on the fetus and infant, infectious diseases of early childhood (notably gastrointestinal and respiratory infections, meningitis, and measles), child abuse, trauma, homicide and suicide, teenage pregnancy, and school failure. The impact of these maladies converts potentially valuable and productive members of society into long-term financial liabilities as well as poignant catastrophes.

Each of these problems can be, and indeed must be, attacked from the research level to find a cogent solution. As an infectious disease expert, I think it is reasonable to use *Haemophilus influenzae* meningitis as an example. This is the most common type of bacterial meningitis in the young child, resulting in considerable sequelae. The incidence of this illness is markedly increased in the poor child.^{1,2} The particular epidemiology of various organisms and host interactions can be discerned to determine the reasons for the increased incidence. The relationships of family crowding, day-care center care, and breast-feeding

to the increased incidence of meningitis in poor children are being elucidated.^{1,2}

The definition of the basic immune response on the molecular level, with particular attention given to possible immune defects in special population groups to the etiologic pathogens,³ have spurred rational development of vaccines (as we are now seeing with conjugate polysaccharide vaccines). These are active areas of research bearing directly on this particular problem of health care for poor children. Finally, it is critical that research be conducted into systems of health care provision on a societal level that will facilitate reliable access for the poor child to the fruits of the health care system, in this case vaccine provision.

This type of investigation is not as "sexy" as dissection of molecular mechanisms, but in the broad sense is every bit as valid a research question. In this area, as in all other areas, the research must be scientifically rigorous and creative, with a mechanistic, not purely descriptive, approach. Without such research, society would deprive the most financially and health-deficient members of our population of the benefits of the more basic research advances. I have used the specific example of *H influenzae* meningitis, but equally cogent and perhaps more dramatic cases can be made for any of the problems outlined above. While some are less basic (eg, the behavioral problems) than others (eg, acquired immunodeficiency syndrome and infectious diseases), in all there is a complex and as yet poorly understood blend of basic biologic and sociopolitical issues.

Identification of the problems is the first step in finding possible solutions. To arrive at accurate solutions requires research. Again, this must include research in the broadest sense, from the molecular to the societal arena. One promising new approach is the recently established Child Health Research Centers program within the National Institute for Child Health and Human Development. Seven centers were established in 1990 with the expectation of creating "centers of excellence" in a specific subject area, with considerable flexibility provided to promote the development of new pediatric investigators. Unfortunately, with the exception of this new initiative, research in general, and research into child health issues in particular, remains among the lower priorities in this country. With the current financial situation, there has been a progressive decline in newly funded research grants and a reduction in funding to established grants. The percentage of funded NIH grants has dropped from 62% in 1974 to an estimated 22% to 24% in 1990.^{4,7} I would like to offer a list of possible solutions to these problems:

Accepted for publication November 30, 1990.

From the Division of Pediatric Infectious Diseases, University of California, San Francisco, and San Francisco General Hospital.

Reprinted from *AJDC* (1991;145:542-543).

1. A basic shift in national priorities to acknowledge that the main threat to our security comes from profound internal societal problems, not external military challenges.

2. A fundamental restructuring of budgetary goals to acknowledge the change in national priorities; health care research would be placed closer to the top of the list along with other social and domestic programs.

3. Acknowledgment that problems of the poor child and child health in particular, if not addressed, will lead to crippling problems in society as the demand for productive and increasingly skilled workers accelerates.

4. With this acknowledgment, increased funding of all areas of child health problems becomes vital.

5. Recognition that funding of scientifically rigorous, creative, and mechanistic research into broad societal problems is as valid as research into molecular mechanisms.

6. Similarly, increased awareness in the pediatric academic world, including our medical school departments and research organizations, of the breadth of research, with rewards for the societal-oriented researcher being similar to those for the molecular scientist.

7. Creation of a cadre of pediatric scientists rigorously trained in the social sciences (eg, sociology, economics, and epidemiology) to enable them to contribute to the solution of the broad arena of medicosocial problems of the poor child through research.

8. A rational, long-term plan for stable national funding mechanisms to maintain the fragile research infrastructure, to provide a level of confidence in the research community, and to ensure a continuity of research and training of entry-level researchers.

9. Increased funding for the Child Health Research Centers to allow the opening of more than the initial seven funded centers.

10. Broadening the scope of Child Health Research Centers to include training and research on every level into the problems that affect children, and enhanced coordination of molecular and societal research efforts.

11. Enhanced cooperation among the public sectors of funding and the private sectors, including foundations and industry, regarding child health problems.

The problems we face in child health care, and child health care of the poor in particular, are immense. Nevertheless, they are every bit as amenable to solution as those involving Middle East oil or the savings and loan institutions. Indeed, health care problems will erode this nation's security as surely as will the more publicized national and international problems. The most efficient so-

lutions to the problems of child health involve the traditional research methods focused on a broad plane. Once a reliable database is established and interventional techniques are validated, the solutions themselves can be instituted. Some believe that a conflict exists between research and health care for the poor, since each requires scarce resources. It is my contention that this nation is wealthy enough to fund both adequately once we reorder our priorities. Indeed, it will be the poor, so disproportionately burdened by ill health, who will benefit the most from the fruits of all research advances.

The theme of the 1991 Society for Pediatric Research's Presidential State of the Art Symposium (occurring at our annual meeting in May in New Orleans, La) is entitled "The Medical-Social Crisis in Child Health." The main areas discussed will include an overview of the vulnerable child, pediatric acquired immunodeficiency syndrome, substance abuse, and health care access for children. Thus, the research societies are acknowledging and beginning to come to grips with these issues. It will be up to the nation to further use the tools of pediatric research to aid in the solution of these problems.

I would like to thank the following people for their reviews and helpful comments: Larry J. Shapiro, MD, president-elect of the Society for Pediatric Research, Department of Pediatrics, UCLA School of Medicine, Los Angeles, Calif; Thomas N. Hansen, MD, secretary-treasurer of the Society for Pediatric Research, Baylor College of Medicine, Houston, Tex; Moses Grossman, MD, University of California Medical School and San Francisco General Hospital; Richard E. Behrman, MD, Stanford (Calif) University and the Center for the Future of Children, David and Lucille Packard Foundation, Los Altos, Calif; and Myron Genel, MD, Yale University, New Haven, Conn, chairman of the Public Policy Council.

References

1. Cochi SL, Fleming DW, Hightower AW, et al. Primary invasive *Haemophilus influenzae* type b disease: a population-based assessment of risk factors. *J Pediatr*. 1986;108:887-896.
2. Wilfert CM. Epidemiology of *Haemophilus influenzae* type b infection. *Pediatrics*. 1990;85:631-635.
3. Granoff DM, Sheetz K, Pandey JP, et al. Host and bacterial factors associated with *Haemophilus influenzae* type b disease in Minnesota children vaccinated with type b polysaccharide vaccine. *J Infect Dis*. 1989;159:908-916.
4. Cassman M. Issues behind the drop in the NIH award rate. *ASM News*. 1990;56:465-469.
5. Institute of Medicine. 1990 *Funding Health Sciences Research: A Strategy to Restore Balance*. Washington, DC: National Academy of Sciences; 1990.
6. Kennedy DE. The rising cost of NIH-funded biomedical research? *Acad Med*. 1990;65:63-73.
7. Kelley DM. NIH Funding for biomedical research, 1990: perceptions and reality. *Endocrinology*. 1990;126:2233-2236.

Poverty and the Health of American Children

Implications for Academic Pediatrics

Richard B. Johnston, Jr, MD

The headline of a recent editorial in the *Philadelphia Inquirer* posed a loaded question: "How is it that we have such great hospitals—and such poor public health?" (August 22, 1989:14-A).

The reference point was Philadelphia in which "high-tech progress and abysmal public health performance . . . coexist too comfortably." Instead of just "cranking out specialists," the editorial said, "academic medicine ought to be taking stock of its broader mission—preventing sickness, making care more easily available and figuring ways to improve the state of public health." The present focus of medical schools has led to sophisticated methods of treatment but

has left too much undone, too many unserved, in a nation with the resources and imagination to make life healthier, even for the poorest, most vulnerable of its people. . . . On matters of public health, academic medicine has been embarrassingly slow to show leadership. . . . Doctors have won heroic fights to save babies. But when it has come to shaping strategies to save generations, their record is skimpy. Medicine has been reactive, repairing the damage *after* it has been done.

The editorial was indeed provocative. The responses from the academic medicine and public health communities correctly emphasized the unfair implication that medical schools and their hospitals can be blamed for the serious health issues that affect the city. Little was said, however, in response to the editorial's basic question: What are medical school people doing to correct these health problems that affect so many humans so profoundly? The fact that the editorial's fundamental question also should have been addressed to our political leaders at a local and national level is frustrating. That so many of the city's (and the country's) people do not receive even basic medical care cannot reasonably be blamed on academic medical centers. In fact, these centers bear much of the burden of this society's failure in public health, because they spend a great deal of largely nonreimbursed time, emotion, and expertise dealing with its consequences. This underreimbursed effort, as important as it may be, makes it harder for academic medicine to accomplish its special mission of education and research.

Nevertheless, the validity of the challenge remains, and it is hard to escape the conclusion that we have a responsibility in academic pediatrics to respond somehow to these issues as they relate to children. Those children who have reduced access to preventive medical care suffer the most illness. Poor children have significantly higher rates of a variety of health-related problems, from infant mortality and traumatic death to prematurity (and consequently its related disabilities), failure to thrive, iron deficiency anemia, lead poisoning, perforated appendix, sick days out of school, and hearing loss.¹ The physical, intellectual, and emotional sequelae of these largely preventable conditions can only decrease the chances that these children will work their way out of poverty as adults.

If academic pediatrics has a responsibility to respond to this tragic situation, what should we do? What about staffing clinics in underserved areas? Editors of the *American Medical Association* and the *American Bar Association* journals have advocated giving 1 week per year for pro bono service, reminding us of an historic element of professionalism that may have faded in recent years.² Certainly, this sort of service can make a major difference in the lives of the children actually treated, and it can be rewarding for the physician. However, to suggest that academic personnel should necessarily contribute even more free medical care, with even further dilution of their academic efforts, seems, in the long run, unwise. Academic departments have special opportunities and faculty with special expertise. These offer the potential to go beyond the immediate problems toward more fundamental solutions with more lasting benefits.

Education is obviously the special province of the academic institution, but what should we teach? The problems are overwhelming, and we have little to offer in the way of solutions; perhaps this is what our students and residents should learn first. It is a widely held tenet of education that the student learns better when knowledge is gained by his or her own initiative and best of all when he or she is truly involved. Involvement in this case necessitates exposure to the societal failures that are related so closely to the poor health of many Americans. This means that students and residents must leave the medical school and hospital and go out into the community where they can see first-hand the consequences of weak education systems, insufficient job training, inadequate low-

Accepted for publication January 22, 1991.

From the Department of Pediatrics, University of Pennsylvania School of Medicine and The Children's Hospital of Philadelphia.

Reprinted from *AJDC* (1991;145:507-509).

income housing, the high costs of medical care, and the downward, grinding spiral of poverty. Endorsement and collaboration of community leaders are prerequisites. The format might be health promotion and provision of medical care (with faculty) at housing projects, schools, shelters, and clinics within an underserved community, but these activities should be part of an educational program with defined educational goals.

For example, with guidance from pediatric faculty, residents and medical students in Philadelphia have taught health care in inner-city biology classes, conducted perinatal clinics in housing projects, made home visits to adolescent mothers, and assumed responsibility for pediatric care in shelters for homeless or battered women. Participating residents carry a beeper that allows them to offer 24-hour coverage. Teams comprising a resident and one or two medical or nursing students make shelter calls weekly and conduct health fairs at 4- to 6-week intervals to immunize, screen for disease, and educate mothers.

What have the students and residents learned from these experiences? Most respond first that they have gained a "gut feeling" for the broad needs of the mothers and children. The complexity of poverty and the plight of real people elicit frustration, anger, and sadness. A second lesson has been that health is not a survival issue for poor people. When food, clothes, and shelter cannot be assured, baby shots or even treatment for infection or anemia become minor concerns; poor compliance is understood differently. Third, these residents and students have learned the serious handicap imposed by the lack of a record system to track children who have no consistent source of care, no consistent financial aid, and sometimes no consistent parent or caregiver. Three additional lessons have probably been the most important: (1) Most residents report a new recognition of their own limitations in addressing the enormity of the need. (2) Most residents clearly realize that throwing even larger numbers of medical personnel at this problem in efforts like theirs will not make it go away. (3) Finally, often to their surprise, the residents identify a clear need for *research*—research on fundamental causes, on what really works, and even on whether their own efforts have made a lasting impact.

Projects like these, established for the purpose of service and education, may be very important to many individual children, but they do not represent a solution to the fundamental problems; however, they can function as an important means toward that end. Projects like these could serve to recruit the next generation of researchers, teachers, and policymakers, better prepared as a group than their predecessors to formulate meaningful and answerable research questions, to emphasize the importance of disease prevention, and to create public health policies that will work. At the very least, participants will be unlikely to underestimate the magnitude of the problem, and some will become informed and intelligent advocates for change.

How can academic pediatrics work most effectively to achieve fundamental, broad-based solutions? A major part of the answer must lie with research, obviously an essential function of the academic medical center. Basic biomedical research has made tremendous contributions to public health and also, incidentally, to reduced expenditures for the treatment of many diseases.³ However,

there has been too little research conducted regarding possible solutions to the health problems of the poor in America, and an estimated one fifth of our nation's children fall into that socioeconomic class.⁴ The critical peer-review system that controls expenditure of public research funds should endorse with enthusiasm good scientific investigation into health promotion and disease prevention. What questions could be more substantial in pediatrics than those related to the reduction of problems such as adolescent pregnancy, premature delivery, adolescent suicide, and accidental deaths?

Research is needed regarding methods to provide care to poor children in our cities and remote rural areas. How can we be more accessible to these children? How can we finance systems to provide this care? How can we reduce medical expenditures in other areas and release funds to meet the need for basic care for poor children? How can we maintain a medical record that will be easily accessible to any pediatrician?

Research into outcomes is needed. Which programs work, and which programs are worth the money and effort? For example, can improved education and counseling reduce prematurity? The fundamental question is whether preventive medicine is cost-effective. Common sense and a quick review of hospital costs suggest that it is, and experience with programs for prenatal care, immunizations, and supplemental food for women, infants, and children (WIC program) support this view.^{5,6} However, the content of medical school and residency curricula and the behavior of organized medicine, hospitals, government agencies, and insurance companies reflect little support for such a concept. In their defense, too little scientifically based research has been done in this area to prove that the principle of cost-effective prevention is broadly applicable.

Consider, for example, extracorporeal membrane oxygenation (ECMO) and the problem of nonreimbursed costs for long-term care in nurseries. It is hard to believe that ECMO, employed to save selected neonates, is more cost-effective (much less more humane) than adding equivalent nursing and support personnel to try to prevent unwanted adolescent pregnancy, to help carry pregnancies to term, or to make routine home nurse visits after delivery, which is the standard of care in Britain. Yet more and more hospitals are establishing ECMO programs but not programs to prevent prematurity in the communities they serve. Research is needed.

Research such as that which might compare cost-effectiveness and outcomes of ECMO and preventive care is extremely difficult to conduct, however. Few academic pediatricians have yet had sufficient knowledge, funding, or whatever it takes to try. Although foundations have provided some financial support for such research, too little public money has been available for this purpose compared with the human need, the critical importance of healthy children to the country's future, and the reasonable possibility that research might lead to a reduction in health care costs. The Medical Treatment Effectiveness Program, established in 1989 under the Agency for Health Care Policy and Research, US Public Health Service, may begin to correct this serious deficiency. This program supports research into fundamental issues of health services, such as which treatments actually work best and which are

cost-effective. (Inquiries may be addressed to the Agency for Health Care Policy and Research, 18-12 Parklawn Bldg, Rockville, MD 20857.)

Although experimental proof of cost-effectiveness and clinical efficacy is necessary to effect fundamental, broad-based change, provision of the data will not guarantee implementation. Federal and state governments have only recently appropriated enough money to support approximately 60% of those eligible for the women, infants, and children (WIC) supplemental food program, fewer than one sixth of those eligible for Head Start, and about half those who need remedial education, and these programs have been proved to be effective.⁷ Expenditures for defense, in the meantime, have far exceeded those for all children's programs combined. Not many pediatricians, either academic or practicing, have had the fortitude to take on the shameful, short-sighted governmental policies that ignore the critical needs of so many of our children. Fortunately, a few have done so, and our professional organizations have begun to guide us toward more effective participation in the area of public policy. Pediatricians are uniquely and eminently qualified to participate effectively by testifying or writing about and by lobbying for legislation related to children.⁸ Considering the critical importance of directing public support toward children, serious efforts to accomplish this should be recognized as legitimate academic endeavor, worthy of endorsement by the departmental and medical school promotions committees.

The devastating effect of poverty on the health of so many American children has created opportunities that are as intellectually demanding, emotionally fulfilling, and immediately important as any available in academic pediatrics. The laboratory becomes the community of which the medical school is a part. Which faculty should

participate? Not all of them, as the poor are not our only responsibility, but more is needed than we have offered so far, especially with regard to research. No group understands the needs of children better or cares more deeply than do pediatricians. The longer we wait for others to solve the problem, the longer the preventable suffering will continue, the greater the number of children who will sustain permanent injury, and the more profound will be the losses to their future and to ours. Academic pediatrics has a responsibility to use its special talents to address these problems. Those faculty who accept the challenge deserve our highest respect and support.

I thank Donald Schwartz, MD, Kenneth R. Ginsburg, MD, Robert E. Merrill, MD, and Waldo E. Nelson, MD, for inspiration and guidance and Charles L. Johnston and Margi Ide for critical review.

References

1. Wise PH, Meyers A. Poverty and child health. *Pediatr Clin North Am.* 1988;35:1169-1186.
2. Lundberg GD, Bodine L. Fifty hours for the poor. *JAMA.* 1989;262:3045.
3. Schroeder SA, Zones JS, Showstack JA. Academic medicine as a public trust. *JAMA.* 1989;262:803-812.
4. Bane MJ, Ellwood DT. One fifth of the nation's children: why are they poor? *Science.* 1989;245:1047-1053.
5. Dutton DB. Social class, health, and illness. In: Aiken LH, Mechanic D, eds. *Applications of Social Science to Clinical Medicine and Health Policy.* New Brunswick, NJ: Rutgers University Press; 1986:31-62.
6. Committee to Study the Prevention of Low Birthweight, Division of Health Promotion and Disease Prevention, Institute of Medicine. *Preventing Low Birthweight: Summary.* Washington, DC: National Academy Press; 1985.
7. *Children 1990: A Report Card, Briefing Book, and Action Primer.* Washington, DC: Children's Defense Fund; 1990:11-12.
8. Berger LR. The pediatrician's role in child advocacy. *Adv Pediatr.* 1982;29:273-291.

Serving the Underserved

Impact on Resident Education

Carol D. Berkowitz, MD

Numerous obstacles stand in the way of universal access to health care.^{1,2} Some of these barriers are political, and influencing them is more problematic, slow, and subject to the climate of the time. Other aspects may be addressed by increasing the pool of physicians aware of and involved in the issues of serving the underserved.

The Ambulatory Pediatric Association (APA), under the leadership of Paul McCarthy, MD, began addressing the issue of serving the underserved in March 1990. A conference, cosponsored by the APA and the Bureau of Maternal and Child Health, was convened. Participants in the conference included nurses, social workers, and physicians, many of whom were chief residents in their respective training programs. These individuals were representative of different regions in our nation and cared for different populations within these regions. Participants were asked to address one aspect of the impact of underserved children on resident education.³ The proceedings of this conference have been published and distributed.⁴ The reasons for this focus on education were multiple. It is readily apparent that the underserved represent a diverse group, including a large portion of financially disadvantaged and/or geographically isolated children (rural and migrant workers). Care of these children, particularly the economically restricted, often falls into the bailiwick of pediatricians in training. By properly preparing these (and all) residents, not only may health care be improved for the children, but commitment and advocacy by the house staff may be encouraged. How will this be achieved? The purpose of this article is to outline the means to accomplish this end.

The APA took on as a project the development of a strategic plan regarding residency education. This plan has both short- and long-term objectives. The major short-term objective is the development of a core curriculum of fundamental knowledge, of necessary skills, and of unique techniques for resident education. Methods for curriculum implementation will also be defined.

The first curriculum category concerns what can broadly be referred to as clinical issues. First, the house officer needs to be able to identify the underserved individual and recognize the numerous barriers (ie, financial, governmental, geographic, institutional, or personal) to health care. The second clinical issue addresses the *specific* health

problems of the underserved and educates individuals about diseases unique to or at higher incidence among certain populations. An example of this would be recognizing and being prepared to treat conditions such as tuberculosis, child abuse and neglect, and dental caries among migrant farm workers and their children.⁵

A third clinical issue involves the teaching of the interpersonal aspects of care, focusing on psychosocial issues and interviewing skills. The means to teach these to house officers have been eloquently addressed by Julia Hamilton, MSW, CISW, a social worker from Yale-New Haven (Conn) Medical Center.⁶ Ms Hamilton teaches about the "five C" model of intervention. These five stages include caring, confrontation, creativity, culture, and closure. The stages are consecutive and developmental, and require mastery of one before proceeding to the next. They are practical and readily learned by house officers. Caring means demonstrating to the patient (by touching or through statements) that one cares. Confrontation involves open discussions with patients about their goals and expectations from the health care system. Creativity includes role modeling or reframing things for patients and their parents. Culture means being sensitive not just to ethnic differences, but to the culture of poverty. Last, closure means letting go, and allowing the family to solve its problems on its own. The goal of Ms Hamilton's five C model is to nurture the unnurtured. Intimately integrated in the clinical issues is teaching the house staff to identify strengths in families and children and to utilize these strengths while providing health care. These families can often benefit from a family systems approach.⁷

In addition to teaching the resident about clinical issues, the curriculum must also include community or environmental issues. First, one must address ecology, the relationship of the child to his or her environment, family, and the social systems that regulate his or her life. One must be knowledgeable about public laws, such as 94-142, that affect the care of children. Likewise, the physician must know about available categorical programs, such as the Special Supplemental Food Program for Women, Infants, and Children; Aid to Families With Dependent Children; and Medicaid, and help patients achieve access to these programs.⁸ The issues of advocacy, ethics, and the legislative process should be addressed in a formal way. Didactic sessions, as well as opportunities to become involved in organizations geared to muster change, should be offered.

The house officer needs to be taught about the orga-

Accepted for publication November 19, 1990.

From the Ambulatory Pediatric Association, McLean, Va, and the Department of Pediatrics, UCLA School of Medicine.

Reprinted from *AJDC* (1991;145:544-545).

nization of health care systems. Included in this is formal instruction on practice management.⁹ Residents should be given career counseling. The realities of reimbursement should be taught. Residents should be encouraged (inspired) to assume some responsibility for the health care of individuals whose major barrier is a financial one. Instruction about health care access and barriers, both financial and otherwise, should be given.

How many training programs already address these issues, and what methods are available to teaching house staff about serving the underserved? The APA is developing a questionnaire to assess the extent of such programs. It is hoped that programs with an established curriculum will make their curriculum available to others.

There are key methods in teaching residents to care for the underserved. First, institutions may develop rosters of faculty mentors, individuals who are knowledgeable about the issues of the underserved, who care for the underserved, and who are role models for young physicians. Such faculty members are often the ones who are overworked and overutilized. They often do not have time to do what they do, much less take on additional tasks as mentors. However, academic acknowledgment for their contribution would validate the importance of their role. Didactic lectures are another forum in which to teach about serving the underserved. These may be included in continuing care conferences. The continuing care clinic, for many house officers, is an excellent setting in which to recognize psychosocial and medical concerns of underserved children.¹⁰ The five C model of intervention could be incorporated in this setting.⁶ Block rotations could be developed, particularly in specific underserved communities. Institutions could develop "exchange" programs to allow for greater exposure of house staff to different underserved populations. Examples of such block rotations would include the homeless, migrant children, inner-city health care, etc. Built into these rotations, or as a separate part of the training experience, would be structured extramural experiences such as home visits, or visits to the welfare office. Such experiences are meant to help the house officer understand and empathize with the day-to-day struggle many of the underserved face.

The educational experience of working on a multidisciplinary team cannot be overstated. The purpose of such exposure is to increase the skills of the house officer through contact with individuals with greater expertise in areas such as interviewing.¹¹ The use of timely feedback using tools such as videotaping is also important to the teaching of communication skills.¹²

The appropriate timing of this instruction is also important. It is critical to use the orientation process to teach the house staff about the demographics of the people for whom they are caring. Likewise, a separate house staff retreat, away from the hectic hospital setting, is to be encouraged as a means to reinspire house staff and focus on these issues. The idealism of the medical student is lost (or put on the back burner) after graduation by the new demands and responsibilities of being a house officer.¹³

In addition to working toward developing a curriculum, organizations such as the APA should work to affect public policy to encourage resident education in the area of underserved children. For example, state and federal programs that would fund initiatives in resident education regarding the underserved should be encouraged. Inclusion of instruc-

tion on caring for the underserved should be a priority in all federally funded primary care programs. Primary-care fellowships with a focus on the underserved should be developed.

Likewise, financial issues related to the underserved should be addressed. Physicians need to be encouraged to join organizations that actively lobby for universal access to health care regardless of financial status. Physicians, individually and as members of organizations, should then be encouraged to support agencies (eg, the Health Resources and Services Administration and the Bureau of Maternal and Child Health) that focus on the underserved and support health policies that provide full funding or primary-care services and a full spectrum of care for the underserved. Loan forgiveness for those pursuing careers in serving the underserved should be encouraged.

The APA as an organization is firmly committed to the issue of serving the underserved. To date, the organization has held a conference exploring this issue and the impact that underserved children have on residency education. The APA has chosen to focus on teaching house staff about underserved children as one approach to combating the problem. It is both hoped and anticipated that better training of house officers will result in a pool of physicians who are not only more knowledgeable about health care issues of the underserved, but also more willing to care for such children, and serve as advocates and forces for change.

References

1. Hubbell A, Waitzkin H, Mishra SI, Dombrink J. Evaluating health care needs of the poor: a community-oriented approach. *Am J Med.* 1989;87:127-131.
2. Schmidt DD. The challenge of caring for the underserved. *Fam Med.* 1989;21:257-260.
3. Lurie N, Yergan J. Teaching residents to care for vulnerable populations in the outpatient setting. *J Gen Intern Med.* 1989;5(suppl):526.
4. *Educating Pediatric Residents to Provide Health Care to Underserved Children.* McLean, Va: Ambulatory Pediatric Association; 1990.
5. Markello J. Children of migrant farm workers living in rural poverty. In: *Educating Pediatric Residents to Provide Health Care to Underserved Children.* Alexandria, Va: Ambulatory Pediatric Association; 1990:63-69.
6. Hamilton J. The process of helping residents learn how to nurture the unnurtured. In: *Educating Pediatric Residents to Provide Health Care to Underserved Children.* Alexandria, Va: Ambulatory Pediatric Association; 1990:11-15.
7. Allmond BW Jr, Buckman W, Gofman HF. *The Family Is the Patient: An Approach to Behavioral Pediatrics for the Clinician.* St Louis, Mo: CV Mosby Co; 1979.
8. Modena W. Serving the underserved: public policy issues. In: *Educating Pediatric Residents to Provide Health Care to Underserved Children.* Alexandria, Va: Ambulatory Pediatric Association; 1990:29-34.
9. Berkelhamer JE. The organization of practice for underserved children: implications for resident education. In: *Educating Pediatric Residents to Provide Health Care to Underserved Children.* Alexandria, Va: Ambulatory Pediatric Association; 1990:29-34.
10. Hodge RH. The method for assuring continuity of care in residency training experience. *J Med Educ.* 1977;52:739-744.
11. Berkowitz C. Comprehensive pediatric management of failure to thrive: an interdisciplinary approach. In: Drotar D, ed. *New Directions in Failure to Thrive.* New York, NY: Plenum Press; 1985.
12. Menahem S. Interviewing and examination skills in pediatric medicine: videotape analysis of student and consultant performance. *J R Soc Med.* 1987;80:138-142.
13. Thomas CB. What becomes of medical students: the dark side. *Johns Hopkins Med J.* 1976;139:185-195.

Improving Health Care Provision to Neonates in the United States

Mildred T. Stahlman, MD

Any discussion concerning the possible approaches toward improving health care provision to neonates naturally encompasses the improvement of health care provision to their mothers, both before and after delivery. In a larger sense, it encompasses solving the deficiencies in health care provision to the entire population, as babies and their mothers are only two of the overlapping circles in this large Venn diagram.

Thirty-seven million Americans are without health insurance, and therefore frequently without access to necessary care. Simultaneously, we devote a larger portion of our gross domestic product to health care than any other industrialized country, yet we rank 15th in male life expectancy, seventh in female life expectancy, and 19th in infant mortality. There is a national realization, by politicians and the public alike, that health care costs are not only excessively high, but that health care resources are unwisely and inequitably distributed.¹

A change in perception of the problem is necessary before a solution can be found. We must learn that health, both mental and physical, is a by-product of a national standard of living, which includes adequate housing and nutrition, a meaningful job with reasonable pay scale, a good (we hope excellent) public educational system, and a national economy that does not fluctuate extremely with changes in political leadership. Second, we must admit that despite our high national expenditure on health care, we are unwilling to pay, as a national priority, for equal access and basic care for all, including those who cannot pay.

In days of increasingly restricted federal and state budgets and skyrocketing medical costs, the inevitable questions arise about the direction we should choose (assuming we still have a choice): should we limit our expenditures for tertiary care medicine and opt for better-supported preventive medicine for the majority of patients, or should we continue to support, without regard to the cost-benefit ratio, each new and exciting technological advance, which may be lifesaving for the few who need it but extremely costly for the patient, third-party carriers, and society in general? Nobody wants to make these hard choices, but clearly the time is rapidly coming when someone must. If the medical profession does not choose to participate in this debate, health care planners and politicians will dictate their decisions to us.

I propose that both approaches are desirable, necessary,

and, to some extent, affordable if we set our priorities straight. Preventive measures have long-term benefits, with no exciting publicity or dramatic breakthroughs, but, in the long run, they save more lives and prove to be more cost effective than crisis medicine. They require, in a country such as ours with such a wide diversity of health care provisions and patient acceptance, a hard sell from kindergarten onward. It is too late to try to change health patterns in high school, and well nigh impossible in adults with their fixed life-styles. This is especially true in the medically underserved since they are trapped in an environment in which changes in life-style to improve health may be totally unrealistic.

Easily learning new ideas is one of the characteristics of the very young, and the focus on good health patterns must begin then. Successful approaches elsewhere have been to assign each child to the equivalent of a public health nurse, who then knows each child's health problems sequentially and sees to it that parents take advantage of available facilities.

This begins with immunizations and well child care, not with the first major illness. Public television programs are used to promote preventive medicine, often called "social medicine," as the society takes responsibility for its organization and cost. If preventive medicine is begun early in life, a generation of essentially healthy young adults can grow up and, with good health care availability and accessibility ingrained in them, pregnant women can care for themselves and their fetuses from conception onward. This will not be an easy concept to sell, either to the Congress or to neonatal intensive care unit (NICU) physicians, but in the long run it will be seen as a necessity.

If we are to change health care provision to mothers and babies, we must first change their lives. We must educate them to consider health as a goal rather than to expect society to provide crisis care that might have been avoided. One of our major problems is the many medical and social consequences of teenage pregnancy. Unless we can reverse this social trend, high-risk pregnancies and very expensive, very-low-birth-weight infants will continue to consume an inordinate amount of our dwindling health care dollars.

How do we decrease the incidence of teenage pregnancies? First, we must admit the truth about the sexual mores of the young. Ever since the introduction of the birth control pill in the early 1960s and the sexual revolution that followed, sexual activity, much of it casual, has been increasing among our teenage population. Unfortunately, we have failed to encourage the use of responsible and effective contraception, and unwanted and high-risk preg-

Accepted for publication November 12, 1990.

From the Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tenn.

Reprinted from *AJDC* (1991;145:510-512).

nancies and infants have been the consequences of this failure.

Another social result has been the 1½ million abortions performed each year in this country. Until parents, schools, churches, and society in general become realistic about their children's sexual mores and either educate them to different social mores or provide them with the knowledge and means to prevent unwanted pregnancy, abortions, high-risk pregnancies, and low-birth-weight infants will continue to be the result. This lack of responsibility on the part of parents, schools, communities, politicians, and teenagers themselves presents appalling consequences to those whose responsibility it is to provide medical and social care for the tragic outcomes of these failures. We cannot change social mores overnight, but we must begin by telling it like it is. The specter of acquired immunodeficiency syndrome has begun to have an impact on so-called safe sex, but it is ironic that a social good—the prevention of teenage pregnancy—may be a consequence of fear of an international plague!

One of the most pressing current ethical questions in NICUs is that of resuscitating infants of borderline viability. Some would even put it in financial terms. It is an excellent example of expending a large amount of health care resources on a small number of infants who can questionably benefit from them. Should we continue to resuscitate infants born before 25 weeks' gestation and/or whose birth weight is below 500 g? There are those who would put the question at even more mature limits. In contrast to this are some societies in which health care is a priority and prenatal care is provided to all pregnant women early in gestation; in these countries (eg, Sweden), ultrasonography is routinely performed by 16 weeks' gestation and correct dating of almost all pregnancies can be done.

In this country, especially among teenagers, the medically underserved, and the poor, accurate estimation of gestational age is often impossible. Likewise, intrauterine estimates of birth weight are very likely to be overestimates. We then are faced with the terrible decision in the delivery room in cases of fetuses of borderline weight. These infants are almost always in need of some sort of resuscitation, and delay in doing so may affect outcome adversely in very important ways. The decision is frequently the responsibility of a young house officer serving time in a neonatal intensive care unit who may not be prepared by experience or ethical considerations to make such important decisions.

One of our best perinatal centers has taken the position of using constant positive airway pressure (CPAP) and oxygen in the delivery room if needed, and delaying assisted ventilation in most cases of borderline viability until the infant can be carefully assessed with regard to maturity and chances of survivability. If the decision is made to continue the most intensive care, nothing reasonable is withheld until the infant is clearly unsalvageable. If, however, the infant is judged too immature to survive after weighing and careful examination, including functional estimates of maturation, no additional intensive care procedures are carried out. This is a hard line to draw, but some guidelines need to be agreed on since the need to discontinue intensive care, once begun, can be a difficult dilemma to face. We know, based on anatomic and func-

tional evidence, that there is a level of maturation necessary for successful extrauterine life, even when all current technologies are available. Perhaps now is the time for consensus on withholding extraordinary means of life support to the extremely immature but live-born fetus.

The development of regional high-risk perinatal and neonatal care networks during the 1970s was one of the most important concepts leading to improved health care provision to newborns and mothers. It was medically sound and fiscally responsible, as it served to provide the most highly skilled individuals with the most sophisticated (and expensive) technology for high-risk patient care. Most regional centers have had an important educational component, serving to raise the regional hospitals' level of expertise to be commensurate with their facilities and personnel. This system has proved to be cost effective and has been associated with a dramatic lowering of perinatal mortality and morbidity, the byproduct of which has been the survival of infants with lower and lower birth weights.

A new move, called deregionalization by some, has developed in recent years, brought about by an overabundant number of trainees flocking into an exciting new field, the realization by hospital administrators that newborn intensive care *can* be profitable for the hospital, and the willingness of third-party payers to pay both hospitals and physicians for high-risk care. Private hospitals have chosen to leave the network and rely on their own facilities and personnel for this highly visible service. The consequence, in many instances, is the skimming off of paying and insured patients, leaving the regional center, usually a university teaching hospital, to care for the uninsured, the poor, and the highest-risk and most costly patients, socially and medically. No reversal of this trend is foreseeable, and I believe that catastrophic health insurance and some method of limiting the enormous profits from high technology and high-risk care will be the ultimate solution.

When I worked briefly as a cardiologist, I said that I was interested in cardiac success, not cardiac failure. We must be more interested in successful pregnancy outcome than pregnancy failure. Our NICUs are filled with these failures and we tend to focus on them as the exciting problems. However, this excitement generates new ideas and new approaches to patient care, and neonatal/perinatal research has been responsible during the last 30 years for the dramatic changes in survival of the high-risk and very-low-birth-weight newborn. We should not abandon newborn intensive care, but should try to limit our use of technology in place of careful clinical medicine.

Above all, NICUs should be the breeding grounds for bright young investigators who will make the breakthroughs and solve the clinical problems, with basic research followed by carefully designed clinical trials. An interesting suggestion has been made that in times of severe fiscal restraints, such as now, a fixed percentage of the entitlement programs should be set aside for research, much as industry sets aside a fixed percentage of costs for research and development (R. B. Cotton, MD, oral communication, October 1990). Without continuous research, and without a continuous cadre of bright young investigators entering neonatology, we will find ourselves frozen in time with no innovations in patient care in the near

future. The by-product of exciting new ideas makes much of the pain, frustration, and cost of intensive care worthwhile.

I am not a medical economist. I was not educated to be one, and the idea of matching the quality of patient care with dollars is abhorrent to me. However, it does not take a financial genius to see the enormous profits that the practice of medicine, the hospitalization of the sick, and the provision of technology and medication can provide to their respective areas of the health care provision system. It has been said that this is the "me" generation, and many physicians have joined those who rank patients' interests below those of first, themselves, the care providers; second, the hospital or academic institution; and finally, third parties (ie, insurance companies, the government, and employers). This attitude is unfortunately becoming increasingly prevalent in maternal and newborn high-risk care.

Third-party reimbursement engendered by procedures and action rather than by thoughtful and responsible inaction has become the norm. The insistence on shorter hours for medical personnel, less personal responsibility, and more consultations, as well as the reliance on technology, the pressures of hospital administrators to fill beds with paying patients, and the enormous markup on pharmaceutical and disposable products, all contribute to enormous patient charges, to less personal satisfaction on the part of care providers, and to more malpractice suits stemming from failures in communication. The result is now the real threat of rationing high-risk (high-cost) care and the development of a two-tiered system of health care provision.

One tier would provide basic, less costly care for the poor and uninsured, and a second tier would provide specialized, more costly care, including all the new technological advances, for the insured and those who can pay. The use of technology has been shown to be directly related to reimbursement for its use.² The only redeeming feature of such a two-tiered system besides the expense might be the reemergence of physicians in the first tier who

rely on their own skills rather than those of others or on machines and tests. The downside, of course, would be the enormous inequity of accessibility to needed expertise and technology in complicated cases that are unreimbursable.

This two-tiered system is not the answer to the lack of universal health care insurance, and catastrophic health insurance is an imperative. Nowhere is this more apparent than in newborn intensive care. A realistic reassessment of physicians' fees and hospital reimbursement coupled with the need to accept patients on the basis of medical need might even start a trend toward lower charges!

Some corporate participants in the health care provision system, such as for-profit hospitals, pharmaceutical houses, and high-technology equipment manufacturers, and a small percentage of physicians have always been considered to be motivated, at least in part, by greed. Until recently, these were considered the few bad apples in the barrel to be identified and avoided. However, the public's perception has shifted and polls now show that physicians are no longer esteemed above other members of society. Many physicians are considered to not care about their patients' welfare, and medical negligence is the common complaint leading to malpractice litigation.

Communication has broken down between physician and patient, and we have lost our youthful idealism. We, as physicians, are seen as part of the problem of maldistribution of adequate health care, rather than as part of its solution. Darwin taught us that we must change or our species would disappear. Before it is too late, physician, heal thyself.

References

1. Priester R. *Overview on Distributing Limited Health Care Resources. Biomedical Ethics Reading Packet No. 5.* Minneapolis, Minn: Center for Biomedical Ethics, University of Minnesota Health Center; December 1988:1-13.
2. Evans RW. Health care technology and the inevitability of resource allocation and rationing decisions, part I. *JAMA.* 1983;249:2047-2053.

Child Abuse and Neglect: Critical First Steps in Response to a National Emergency

The Report of the US Advisory Board on Child Abuse and Neglect

Richard D. Krugman, MD

In June 1990, the US Advisory Board on Child Abuse and Neglect presented its first report to the Secretary of the Department of Health and Human Services and Congress. The board had studied the status of the child protection system (broadly defined as the *system*, not just the child protective services (CPS) agencies involved in the multidisciplinary recognition, intervention, treatment, and prevention of child abuse and neglect). The board was established under provisions of public law 100-294, and the 1988 Amendments to the Child Abuse Prevention and Treatment Act. The mission of the board is to evaluate the nation's efforts to accomplish the purposes of the Act and to make recommendations on ways in which those efforts can be improved.

The board concluded that child abuse and neglect in the United States now represents a national emergency. This conclusion is based on three findings: (1) each year, hundreds of thousands of children are being starved and abandoned, burned and severely beaten, raped and sodomized, berated and belittled; (2) the system created by the nation to respond to child abuse and neglect is failing; and (3) the United States spends billions of dollars on programs that deal with the results of the nation's failure to prevent and treat child abuse and neglect.

The board believes that the extent of the emergency is so compelling that it dictates an immediate response and has recommended 31 critical first steps that will provide a framework for a decade of review and reconstruction of policies and programs that have exacerbated the emergency. These 31 critical first steps, if implemented, will only control the emergency. Once it is brought under control, the board believes that the nation should commit itself to achieving an equally important goal: the replacement of the existing child protection system with a new, national, child-centered, neighborhood-based, child protection strategy. The Board's 31 recommendations (numbered in parentheses below) are organized into the following eight areas.

RECOGNIZING THE NATIONAL EMERGENCY

Each citizen (recommendation 1), each elected official (recommendation 2), and each legislative body (recommendation 3) is called on to recognize the extent of the

problem in our society and take personal responsibility to join with others to resolve this emergency.

PROVIDING LEADERSHIP

The president (recommendation 4), the governors of the several states (recommendation 5), the county executives, and mayors (recommendation 6) are called on to become visible and effective leaders within their jurisdiction in renewed child protection efforts. Legislative bodies at all levels are urged to support these efforts by providing funding for the initiatives developed. The rebuilding of our family-support infrastructure is as important as our willingness to rebuild our banking system (recommendation 7). Scientific societies and professional organizations are urged to respond to the emergency by making the issue a priority, stimulating research, and providing guidance to their members (recommendation 8).

COORDINATING EFFORTS

The secretary is called on to work with the governors of the states to eliminate barriers that stand in the way of providing coordinated community services related to the protection of children (recommendation 9), to work with the director of the Office of National Drug Control Policy in the White House to assure coordination of efforts to control substance abuse and child abuse (recommendation 10), and to coordinate with the attorney general to address the issue of fatal child abuse and neglect (recommendation 11).

GENERATING KNOWLEDGE

This area has four recommendations shaped by the board's conviction that good policy begins with good facts. The secretary is asked to establish a federal data collection system that reflects not only social service dimensions of the problem, but the public health, mental health, and legal/judicial dimensions as well (recommendation 12). The secretary is also asked to launch major coordinated initiatives to promote the systematic conduct of research related to abuse and neglect (recommendation 13), to coordinate knowledge about what does and does not work in the child protection system (recommendation 14), and to increase the number and professional qualifications of researchers in child abuse and neglect (recommendation 15).

DIFFUSING KNOWLEDGE

The secretary is asked to ensure that practitioners, policy makers, and the general public have ready and continuous

Accepted for publication January 23, 1991.

From the Department of Pediatrics University of Colorado School of Medicine, Denver, and the C. Henry Kempe National Center for the Prevention of Child Abuse and Neglect, Denver.

Reprinted from *AJDC* (1991;145:513-515).

access to information through the establishment of a permanent governmental unit (recommendation 16). The board also asks journalists, broadcast executives, publishers, as well as individual media outlets to join in a campaign to promote public understanding of the emergency and the most effective ways of addressing it (recommendation 17).

INCREASING HUMAN RESOURCES

These six recommendations are shaped by the board's conviction that the status, qualifications, training, workload, and representativeness of public agency CPS workers are intrinsic to the crisis in the child protection system. The secretary is asked to establish the position of public agency "CPS caseworker" as a professional specialty (recommendation 18), establish minimum educational requirements for the position of a public agency CPS worker (recommendation 19), and ensure that all public agency CPS workers receive adequate preservice and in-service education and training (recommendation 20). The board proposes that the secretary and Congress, with their counterparts at state and county levels, establish acceptable caseload standards for these workers (recommendation 21). State and local social service officials are asked to launch an aggressive campaign for recruitment of CPS workers representative of the racial, ethnic, and cultural composition of the caseload population (recommendation 22). The secretary is also asked to ensure a steady increase in the total number of the nation's professionals in medicine, social work, law, law enforcement, mental health, and education who possess the necessary competence and skill to participate effectively in the protection of children (recommendation 23).

PROVIDING AND IMPROVING PROGRAMS

The secretary is asked to ensure that more resources are allocated to establishing voluntary and nonpunitive access to help. It should become as easy for a person to pick up the telephone and receive help before abusing a child as it is now for a neighbor to report that person after the fact (recommendation 24). The secretary and governors are asked to ensure that efforts to prevent the maltreatment of children are substantially increased. At a minimum, this should involve significant expansion of the availability of home visitation and follow-up services for all families of newborns (recommendation 25). Congress and state and local legislatures are asked to ensure that resources devoted to prevention and to treatment do not come at the expense of each other (recommendation 26). Private sector organizations are encouraged to increase significantly the involvement of their local affiliates and outlet members or employees and child protection efforts (recommendation 27). Congress, the attorney-general, and chief justices are asked to ensure that all state and local courts resolve cases promptly and fairly (recommendation 28). The Secretary of Education and his counterparts at the state and local level are asked to launch a major initiative to establish and strengthen the role of every public and private school in the prevention, identification, and treatment of abuse and neglect (recommendation 29).

PLANNING FOR THE FUTURE

The final two recommendations are shaped by the board's intention to design and propose a new national

strategy for the protection of children. The board proposes that Congress direct an appropriate research agency to determine the cost of developing and implementing a comprehensive national program for the prevention and treatment of child abuse and neglect, as well as the projected cost of not developing and implementing such a program (recommendation 30). Finally, the secretary, in concert with the National Governors Association, the US Conference of Mayors, and the National Association of Counties, is asked to develop a model planning process aimed at generating plans for the coordinated comprehensive community-based prevention, identification, and treatment of abuse and neglect with steps taken to ensure that the model process is implemented throughout the nation (recommendation 31).

In presenting these recommendations to the nation, the board has attempted to provide direction, vision, and leadership and expects that its recommendations will serve as the impetus for much needed action to address the national emergency. What does this mean for pediatricians, and why should we care?

Throughout the United States, many pediatricians are faced with a major dilemma; they are knowledgeable about statutes that require them to report all cases of suspected abuse and neglect and yet, in many communities, they observe that their reports are received but inadequately acted on. The child protection system in the United States is fragmented, under-funded, overworked, episodic, and unable to generate any information that would let us know that children are, in fact, being protected. Some physicians have deliberately followed a pattern of civil disobedience and do not report child abuse because of their belief that above all they should "do no harm." In my view, such an approach leaves physicians, and more importantly children, at serious risk. The answer is not to capitulate and abandon a child protection system that is in crisis. As the US Advisory Board suggests, it may be necessary to replace our existing system with one that works, but our efforts need to be focused on rebuilding the supportive infrastructure for families that has been lost in this country (ie, the prevention and treatment arms of the system) without abandoning our recognition and investigation arm. All over the United States, CPS agencies are refusing to open more and more cases so that they will have fewer and fewer with which to deal.

In Colorado, a bill is currently pending in the legislature that would raise the requirements necessary to "prove" a case of abuse from "credible evidence" to "the preponderance of the evidence." The bill will also remove the requirement that home visits be done on all reports, and finally will put in statute that CPS agencies need no longer be involved when children are abused outside the family. This is already happening in practice, but if it becomes the norm nationally to reset in statute those things that we *are* doing instead of those things that we *should* be doing, it is clear that we will continue to erode our ability to protect children. Such statutes are the single best milestones of the decline of a society's moral values.

If children are to be protected and death rates are to decline, we must do more about prevention. Throughout the country, efforts are being made to develop "family preservation programs." These programs, described over

20 years ago by Kempe and colleagues¹ have been rediscovered. They provide intensive 4- to 8-week treatment to families to help them out of crises, and have the advantage of leaving children in the home. They are clearly cost effective in that they reduce the need for foster care, but an 8-week fix for after-the-fact abuse is treatment, not prevention, and may be insufficient for long-term success.

It is time for pediatricians in this country to recognize that our long experiment in making the departments of social services in the country responsible for the protection of children has failed. It is not their fault. Beset by budget cuts, caught in a web of legal expectations that they could not possibly fulfill, public child welfare agencies, public health nursing, and mental health agencies simply cannot do what they should be doing. These three critical components of the supportive infrastructure that used to care for families have literally disappeared. The role of child welfare is now primarily income maintenance and investigation of abuse reports. Public health nursing is now primarily fee for service home health care nursing. The mental health system is completely clogged with the long-term, deinstitutionalized, severely mentally ill. It is no longer possible in this country for a family who needs help *before* they abuse their child to get that help by calling any of these three agencies. Further, the approach of these agencies is episodic: none has continuity of care as a principle. It is increasingly difficult in our competitive, prepaid health care environment to provide the continuity of care that these families desperately need, but it is my view that only the health system has the opportunity to save children from the failures of our child protection system.

There are several recommendations within the Advisory Board Report that would form the basis of what pediatricians can do. We need to recognize that this is an emergency! We can provide leadership through our professional societies to ensure that the problems of abuse and neglect will be dealt with as a priority during the coming decade (not *the* priority, but one of the priorities that we must pay attention to during this decade). We desperately need more physicians and child health professionals to

work in both the clinical and research areas of abuse and neglect. We need to take responsibility for prevention. The work by Gray et al,² Olds et al,³ Helfer,⁴ and others has shown that we have the technology to be able to prevent the physical abuse of children. *Not* implementing what we know is tantamount to the withholding of poliovirus vaccine from children when an epidemic is poised to strike.

Pediatricians, through their contact with families, can make a difference. They can develop home visitation systems out of their offices, multispecialty groups, or hospitals that will provide support to new families in their community. Ultimately, if we make it as easy for a family to pick up the telephone and get help *before* they abuse their child as it is now for their neighbors to report them after the abuse has occurred, we will have taken a major step in preventing the abuse and neglect of our children. The Advisory Board's recommendations make it clear that this is no easy task. A future report will outline a new, coordinated, comprehensive, child-centered neighborhood-based child protection system. Pediatricians need to be part of that system so that we can avoid spending millions of dollars on the technology that allows babies born at 28 weeks' gestation to leave the hospital only to go home to an environment in which they are violently shaken or killed within weeks or months of their discharge, or stand by helplessly while millions more go to build prisons that will house the abused children of the 1970s and 1980s who are the failures of our present child protection system.

References

1. Kempe CH, Helfer RE, eds. *Helping the Battered Child and His Family*. Philadelphia, Pa: JB Lippincott; 1972.
2. Gray JD, Cutler CA, Dean JG, Kempe CH. Prediction and prevention of child abuse and neglect. *J Soc Issues*. 1984;35:127.
3. Olds D, Chamberlin R, Henderson C. The prevention of child abuse and neglect: a randomized trial of nurse home visitation. *Pediatrics*. 1986;78:65.
4. Helfer RE. A review of the literature on the prevention of child abuse and neglect. *Child Abuse Negl*. 1982;251:6

A Survey of the Health of Homeless Children in Philadelphia Shelters

Ruth M. Parker, MD; Leslie A. Rescorla, PhD; Jonathan A. Finkelstein, MD; Nathaniel Barnes, MD;
John H. Holmes, MS; Paul D. Stolley, MD, MPH

● We conducted a random-sample survey of homeless children and their mothers residing in Philadelphia (Pa) shelters. One hundred forty-six families were included in the final sample, resulting in an 80% response rate. The aims of the survey were to characterize the child's current and past health status, to determine access to and use of medical services, and to determine the serum erythrocyte protoporphyrin levels and tuberculin skin test status of the children. In addition, psychological tests were administered to both child and parent to assess developmental level and psychological problems. Finally, detailed questions were asked concerning the reasons for the homeless condition. The important reasons for homelessness cited in the survey included physical abuse, substance abuse, disagreements with landlords, and poor living conditions. The children's health problems included a high incidence of reported accidents and injuries, burns, and lead toxicity; the parents suffered from depression, physical abuse, and substance abuse. School-aged children tended to have low scores on tests of expressive vocabulary and word decoding, and preschoolers seemed to be below age expectations in receptive vocabulary and visual motor skills. The findings of this study suggest that homeless children tend to score poorly on developmental and psychological tests and tend to sustain serious burns and accidents. Policy implications of the survey include suggestions for health screening, rehabilitation, and education.

Several studies have described the health problems of homeless persons. The health of homeless families and their children is less well defined, but a few studies examining the health status of homeless children are available. Bassuck et al¹ studied 80 families and their 151 children living in 14 Massachusetts shelters in 1985 and reported that about half of the children had developmental lags as assessed by the *Denver Developmental Screening Test*. They also reported a high frequency of learning disabilities, depression, and anxiety. Alperstein et al² reviewed clinic records of 256 homeless children younger than age

5 years who attended a primary care clinic in New York, NY. Higher rates of hospitalization, higher serum lead levels, delayed immunization, and increased reports of child abuse were found compared with a population of children of the same age and socioeconomic status who lived at home but attended the same clinic.

A 1986 probability sample of homeless families in King County, Washington, described 82 families with 158 children younger than age 17 years. Thirteen percent of these parents reported their children's health as "fair" or "poor." Compared with the general US population, this sample of homeless persons had a higher rate of emergency department use, and a higher proportion had no health insurance (35% vs 12.5% for the general US population). The population studied was 27% white, 44% black, 8% Hispanic, 6% native American, and 15% mixed. Approximately one third of the children were obese, scoring above the 95th percentile in weight for height measurements.³

Comparing 98 children younger than age 12 years residing in New York City welfare hotels with 253 domiciled poor children, Acker et al⁴ found an increased rate of iron deficiency among the homeless children.

The *Health Care for the Homeless Project*⁵ listed the most common reasons homeless children were brought by their parents to see health care workers: respiratory infection, minor skin problems, ear problems, gastrointestinal complaints, trauma, eye problems, and lice infestations.

PHILADELPHIA SHELTER SYSTEM FOR HOMELESS FAMILIES

Estimates of the composition of the homeless population in Philadelphia were derived from a project directed by the Philadelphia Health Management Corporation, and the 1985 estimates portray a total homeless population in Philadelphia of 10 000 to 13 000 people.⁶ At the time of the study, an estimated 2500 to 5000 homeless children lived in Philadelphia, a majority of whom were thought to be younger than age 5 years.

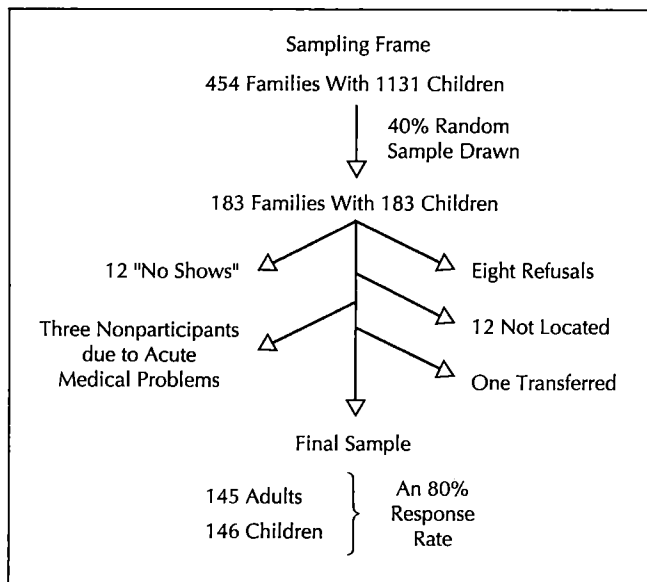
The city shelter network included the one city-owned facility and 22 other privately owned shelters under contract with the city. On presentation to the city authorities, an appropriate space was usually located and the family was placed within a few hours; however, if an appropriate unit could not be found, the family was housed in a large gymnasiumlike room at the city-owned facility, which accommodated as many as 75 families.

All of the 22 shelter buildings in our sample were structures converted from former uses, ie, a car dealership, a retirement home, an orphanage, a funeral home, and a school. The capacity of the shelters and the actual living

Accepted for publication January 30, 1991.

From the Department of Medicine, Emory University School of Medicine, Atlanta, Ga (Dr Parker); the Department of Human Development, Bryn Mawr (Pa) College (Dr Rescorla); the Department of Pediatrics, Children's Hospital, Boston, Mass (Dr Finkelstein); the Department of Urology, Duke University Medical Center, Durham, NC (Dr Barnes); and the Clinical Epidemiology Unit, Section of General Internal Medicine, Department of Medicine, University of Pennsylvania School of Medicine, Philadelphia (Mr Holmes and Dr Stolley).

Reprinted from *AJDC* (1991;145:520-526).



Diagrammatic representation of sample and final response rate.

arrangements for families varied greatly, with from one to six families housed in one room. Few cribs were available and only one shelter had an isolation room for persons with communicable diseases. All of the shelters housed single women with dependent children, and four of the shelters also housed single women without children. One shelter housed a large proportion of troubled girls placed there for supervision and guardianship.

Most shelters referred their clients to local neighborhood clinics or hospitals for medical assistance. One shelter had a nurse and an infirmary, and another shelter employed the services of a visiting nurse practitioner organization. All shelters had paid staff, including nighttime staff. Three privately owned shelters were managed by formerly homeless women who resided there.

AIMS AND OBJECTIVES

When we planned our study in September 1987, there was little published information concerning the health status of homeless families, and much of what was available had not been obtained using random sampling methods. We therefore designed a survey of homeless families residing in shelters in Philadelphia to obtain descriptive information that would be helpful in health planning and in identifying specific problems and unmet health needs. In surveying randomly selected homeless families in Philadelphia shelters to describe their health status and other characteristics, we targeted seven main areas: (1) the child's health, including general health perceptions, medical history, and recent illnesses; (2) access to health services for children; (3) social, economic, and demographic features of the family, such as family structure, income, work history, and school performance; (4) parental health history, which focused on drug and alcohol use, chronic illnesses, and childbearing history; (5) visual screening of the children; (6) laboratory investigation of the children using a tine test for tuberculosis and determination of erythrocyte protoporphyrin (EP) levels; and (7) developmental and psychological screening of the children using tests appropriate to their ages. By obtaining such information we hoped to better understand how resources can be best allocated to the homeless population.

SUBJECTS AND METHODS

Defining the Population and the Sampling Method

After receiving permission from the Philadelphia government to conduct the study, we obtained information regarding the number, type, and location of all shelters with which the city contracts. We excluded homeless families residing at noncontracting shelters since there was no available list of all such facilities and they housed only a small proportion of the city's homeless families. We contacted each of the 21 privately owned shelters and the one city-owned facility to request their participation in our study and to ascertain their current occupancy. Two shelters, each housing about 20 families, refused to participate; seven shelters had only one to eight families present and were excluded from our sampling frame due to their small size. Because homeless families were randomly assigned to shelters regardless of shelter size, the exclusion of these nonparticipating shelters was unlikely to have biased our sample. The remaining 13 shelters agreed to participate. We conducted on-site visits to interview shelter directors and conduct the survey.

Our research team spent prearranged days at each shelter conducting the survey. Each shelter maintained a roster of resident families. Using a table of random numbers, we selected from 28% to 49% of the families present at each shelter for study. The family was contacted at least twice to set up an appointment. Next, we randomly selected one child, aged 12 years or younger, from each family and invited this child to participate in the study. There were 454 families, with 1131 children, in the 13 shelters during our census. One hundred eighty-three families, with one randomly selected child per family, were selected for study. One hundred forty-six families enrolled in the study. There were 37 nonrespondents, including eight who refused to participate, 12 who did not show up for interviews, 12 who could not be located to request participation on at least two attempts, three who could not participate due to acute medical problems (ie, premature labor for one woman and bleeding during pregnancy for two women), one who was transferred to another shelter before her scheduled appointment, and one who was inebriated on the two occasions we arranged for the interview. The mother's responses in this latter case were not included in our analysis, but those of her child were included.

The study included information on 145 families and 146 children (Figure). Psychometric data were requested only for the 98 children aged 2 years and older. Following completion of this study of homeless children, we were able to collect psychometric data on a small sample of inner-city-domiciled children in Philadelphia. These comparative data are reported elsewhere.⁷

Parents signed informed consent forms, and an oral interview was conducted lasting 45 minutes. The survey questionnaire targeted four main areas: (1) demographic and socioeconomic characteristics, including family structure, a calendar of homelessness (a chronological list of all places the family resided in the previous 5 years), and use of social services; (2) access to medical care; (3) the child's health history, including perceptions of general health, functional status, chronic medical conditions, hospitalizations, immunization status, and school performance; and (4) parental health history, including chronic and recent

Table 1.—Highest Level of Education Achieved by Homeless Mothers (N = 145)

Education Level	No. (%) of Mothers
<12 years of school	72 (50)
<12 years and vocational school	2 (1)
High school equivalence degree	5 (3)
High school graduate	38 (26)
High School graduate and vocational school	18 (12)
Some college	10 (7)
College graduate	0

acute illnesses, history of smoking, and alcohol and drug use.

Adult subjects completed the Peabody Picture Vocabulary Test-Revised (PPVT-R), Beck Depression Inventory (BDI), and an age-appropriate Achenbach Child Behavior Checklist (CBCL). Simultaneously, the children completed a battery of age-appropriate psychological and developmental tests, listed and described below.

Tests Administered

Wechsler Intelligence Scale for Children-Revised (WISC-R) Vocabulary.—The best predictor of WISC-R IQ, this subtest involves asking the child to give definitions for a list of vocabulary words. The test was given to children aged 6 to 12 years to measure verbal ability.

WISC-R Block Design.—The child assembles geometric blocks to duplicate a model under a time limit. Block Design is the subtest correlating most highly with WISC-R Performance Scale IQ, and was given to children aged 6 to 12 years.

Wide Range Achievement Test-Revised (WRAT-R) Reading.—On this subtest, the children aged 6 to 12 years were asked to read a list of words. Children who could not read were asked to match and identify letters of the alphabet.

House-Tree-Person (HTP).—The child is asked to draw a picture of a house, a tree, and a person and then to answer a few questions about each drawing. The drawing of a person was scored by certified school psychologists using the Goodenough-Harris developmental system.

Stanford-Binet Intelligence Scale: Fourth Edition (IV) Vocabulary.—This subtest assesses a child's ability to label pictures and give word definitions for common words. The vocabulary subtest is the best predictor of overall Stanford-Binet IV Test Composite Score (IQ) and was given to children aged 2 to 5 years.

PPVT-R.—This test was given to children aged 3 to 5 years to assess their receptive vocabulary by asking them to point to one of four pictures on a page that depicts the stimulus word.

Beery Visual-Motor Integration (VMI).—The Beery VMI Test involves copying a series of simple geometric forms (eg, line, circle, and cross) and was given to children aged 3 to 5 years.

Yale Cubes.—Children aged 2 to 5 years were asked to copy a series of cube formations (ie, tower, bridge, house, and steps). This task was drawn from the Gesell Preschool Screening Test and the Yale Developmental Schedules.

Yale Drawings.—Two-year-old children were asked to copy a set of geometric forms (ie, vertical line, horizontal

Table 2.—Parity of Homeless Mothers (N = 145)

No. of Children	No. (%) of Mothers	Cumulative %
1	22 (15)	15
2	35 (24)	39
3	44 (30)	69
4	20 (14)	83
5	9 (6)	89
6	8 (6)	95
7	2 (1)	96
8	3 (2)	98
9	2 (1)	99

Table 3.—Maternal Age at Delivery of First Child (N = 145)

Maternal Age, y	No. (%) of Mothers	Cumulative %
13	1 (1)	1
14	6 (4)	5
15	13 (9)	14
16	21 (14)	28
17	20 (14)	42
18	25 (17)	59
19	14 (10)	69
20	14 (10)	79
≥21	31 (21)	100

Table 4.—Incidence of Illness Among Homeless Children During Previous 4 Weeks (N = 145)

Type of Illness	No. (%) of Children
Gastrointestinal	54 (37)
Cough with fever	35 (24)
Ear infection	29 (20)
Conjunctivitis	25 (17)
Other	2 (1)

line, cross, and circle).

CBCL.—Mothers of all the children completed the CBCL. This involved reading a list of 118 behavioral symptoms and indicating for each one whether it was "untrue," "somewhat true," or "very true" of her child. The scores for "Total Problems," "Externalizing," and "Internalizing" were calculated for each child.

BDI.—A questionnaire for adults (mothers in this study) was administered that measures the presence and degree of "depression" or depressive affect.

Three Wishes.—Each child was asked to tell three things he or she would wish for if wishes could come true.

Children older than age 6 years had their vision screened using the Richmond Kindergarten Test Chart.

Parents gave separate informed consent for laboratory testing of their children. These tests included a time test placed on the right forearm by a standard procedure (read by an interviewer 48 to 72 hours later) and a determination of the EP level from a finger stick sample of blood to assess lead exposure. The EP level was determined by the City

Table 5.—Incidence of Major Accidents, Injuries, or Medical Conditions Over the Lifetime of Homeless Children (N = 145)

Condition	No. (%) of Children
Burn with scar formation	20 (14)
Lead poisoning	16 (11)
Poison/pill ingestion	10 (7)
Fracture	9 (6)
Unconsciousness	9 (6)
Seizure	6 (4)

of Philadelphia Health Department Laboratory. Values greater than 0.62 $\mu\text{mol/L}$ were considered abnormal, and a follow-up determination of serum levels was requested. Parents were notified of abnormal EP levels and instructed on the proper follow-up procedures.

RESULTS

Population Studied

Adults.—One hundred forty-five adults completed our interview and examination. One hundred thirty-one subjects (90%) were black, 11 (8%) were white, and three (2%) were white or Hispanic. Fifteen percent stated that they were currently married and 46% were "never married"; the remainder said they were divorced or separated. Half of these 145 adult respondents had not completed high school; 10 (7%) of the participants in the study stated that they had completed at least 1 year of college (Table 1).

Concerning parity, 44 (30%) of the 145 respondents reported that they had three or more living children, and two individuals (1%) reported that they had nine children (Table 2). Eighty six (59%) of the respondents had delivered their first child by age 18 years (Table 3). One-hundred forty (97%) of the 145 mothers stated that they were not working; only five (3%) were currently engaged in some part-time work.

Although the mean length of stay in the current shelter was 12.7 weeks, the range was wide (<1 week to 82 weeks), and the mean length of homelessness was 19.3 weeks. Families had resided in a mean of 3.2 places (range, one to 20 places) in the previous 12 months, and in the previous 5 years had moved a mean of 4.7 times (range, one to 22 times). In the previous year, 14 (10%) owned their own homes, 112 (77%) rented their own apartments, 72 (50%) lived with their mothers, 78 (54%) "doubled up" or shared housing, and 10 (7%) lived on the streets, in abandoned buildings, or in cars. (This total is greater than 100% because more than one living arrangement was possible during the year.)

When asked about their *primary* reason for homelessness, 36 (25%) cited poor living conditions at a previous residence; 33 (23%) were evicted; 29 (20%) had disagreements with their landlord, other tenants, or family members; 15 (10%) attributed their homelessness to a lack of money or loss of a job; 10 (7%) had experienced a disaster (eg, fire or flood); seven (5%) cited abuse, and four (3%) cited divorce or separation.

Findings Concerning General Health and Use of Services

When queried about their child's health, 55 (38%) of the respondents believed it was "excellent"; 39 (27%), "very

Table 6.—Reasons for the Hospitalization of Homeless Children in the Previous Year (N = 145)

Reason for Hospitalization	No. (%) of Children Hospitalized
Injury	12 (8)
Other illness	12 (8)
Asthma	7 (5)
Dehydration	6 (4)
Seizure disorder	4 (3)
Respiratory infection	3 (2)
Other infection	3 (2)

Table 7.—Chronic Illnesses of Homeless Mothers Requiring Regular Medical Care (N = 145)

Illness	No. (%) of Mothers
Hypertension	13 (9)
Renal disease	6 (4)
Cardiovascular disorder	5 (3)
Diabetes mellitus	4 (3)
Cancer	3 (2)
Physical disability	6 (4)
Other	23 (16)

Table 8.—Drug Use Reported by Homeless Mothers in the Previous Year (N = 145)

Type of Drug	No. (%) of Mothers
Marijuana	61 (42)
Cocaine ("crack")	32 (22)
Amphetamines	4 (3)
Polychlorinated biphenyl	4 (3)
None	44 (30)

good"; 29 (20%), "good"; 19 (13%), "fair"; and only three (2%) thought that their child's health was "poor." This favorable assessment of their children's health was restated when the parents were asked to compare the health of their child with that of other children; very few stated that their child's health was worse than that of most other children. Furthermore, only nine (6%) of 145 parents said that their child had a condition that interfered with usual activities.

When mothers were asked about recent health problems their child had encountered in the previous 4 weeks, gastroenteritis, otitis, cough, and conjunctivitis were the conditions most frequently mentioned (Table 4). Twenty-nine (20%) of the 145 respondents for these questions reported that their child had been seen in an emergency department during the past year as a result of an injury or fall, and nine (6%) of these children had sustained a fracture; nine children (6%) were reported "knocked unconscious" because of trauma during the previous year. Twenty (14%) of the 145 children had received burns during the previous year severe enough to have scarred; 10 children (7%) had swallowed a poison or medicine and required emergency treatment (Table 5).

Seventeen of the children (12%) had been hospitalized

Table 9.—Descriptive Statistics for Psychometric Measures

Measure*	Age Range, y	Domain	Normative	Mean (SD)			
				School-Aged (6-12 y) (n=43)	Preschool (aged 3-5 y) (n=40)	Toddlers (aged 2 y) (n=15)	Mothers (n=145)
WISC-R Vocabulary	6-12	Verbal ability	10 (3)	6.67 (2.92)	...	...	...
WISC-R Block Design	6-12	Nonverbal problem solving	10 (3)	7.72 (3.33)	...	...	...
WRAT-R Reading	6-12	Reading, decoding	100 (15)	80.88 (20.81)	...	...	...
Draw-A-Person	3-12	Visual-motor skill	100 (15)	85.50 (16.22)	79.96 (13.12)	...	...
Binet IV Vocabulary	2-5	Verbal ability	50 (8)	...	41.44 (4.25)	45.27 (2.97)	...
PPVT-R	3-5, Mothers	Receptive vocabulary	100 (15)	...	67.84 (13.89)	...	71.99 (14.48)
Beery VMI	3-5	Visual-motor skill	100†	...	82.46 (9.06)	...	...
Yale Cubes	2-5	Nonverbal problem solving	100†	...	85.41 (21.43)	87.13 (11.72)	...
Yale Drawings	2	Visual motor skill	100†	...	...	88.67 (32.28)	...
CBCL Internalizing	2-12	Emotional problems	50 (10)	57.02 (9.11)	59.05 (11.61)	47.00 (6.98)	...
CBCL Externalizing	2-12	Behavior problems	50 (10)	57.68 (11.49)	55.05 (9.56)	45.13 (7.90)	...
CBCL Total Problems	2-12	Overall problems	50 (10)	57.92 (10.42)	59.87 (11.08)	44.73 (8.06)	...
Beck Depression Inventory	Mothers	Depression	...	...	...	...	13.26 (10.28)

*WISC-R indicates Wechsler Intelligence Scale for Children-Revised; WRAT-R, Wide Range Achievement Test-Revised; PPVT-R, Peabody Picture Vocabulary Test-Revised; Beery VMI, Beery Visual-Motor Integration; and CBCL, Child Behavior Checklist.

†Quotients produced by dividing mental age by chronological age.

during the previous year; the major reasons for hospitalization included injury, seizures, dehydration, asthma, and other respiratory infections (Table 6).

The mothers of the homeless children were asked about the antenatal care they received when pregnant with the child in question: only four (4%) of the 104 mothers who answered this question reported receiving no care at all, and most of the other respondents reported first receiving care during their first trimester. Fourteen (13%) said that their care began during the fifth month of pregnancy or later.

By and large, parents seemed to have found some sort of medical care for themselves and their child; however, 23 (19%) of 124 respondents could not identify a place to which they could go for care. Fifty-five (44%) used the hospital emergency department or clinics for care, 53 (43%) went to a community clinic, 12 (10%) went to a private physician's office, and only four (3%) visited a health maintenance organization.

Dental care was harder to evaluate since many of the children were aged 3 years or younger, an age group that usually does not receive regular dental care.

Findings of Physical and Laboratory Examinations

Tine tests to screen for tuberculosis were placed on 92 children. Interviewers read the results between 48 and 72 hours later and found six positive findings (7%) from 0 to 5 mm, one positive finding (1%) from 6 to 10 mm, and 69 negative findings (75%). We were unable to locate 16 children (17%) for the test reading. Finger-stick blood samples for EP determination by extraction were obtained from 96 children, but 20 samples were not processed because of

clotting or insufficient quantity. Nine (12%) of the remaining 76 samples had abnormal values ($>35 \mu\text{g/dL}$).

Visual acuity of children older than age 6 years was checked using the Richmond Kindergarten Test Chart. Ten (26%) of the 39 children tested failed to identify pictures at a distance of 600 cm with visual acuity better than 20/40.

Health of Parents

The reported health status of the mothers is summarized in Table 7. Seventeen (12%) of the 138 respondents stated that they were pregnant at the time of the interview. Ninety-nine (68%) of 145 mothers rated their own health as "good" or better, but specific health problems were cited by many women. Six (4%) of 145 respondents reported physical disabilities that interfered with their daily activities, and 13 (9%) reported that they had hypertension. Twenty-one respondents (14%) reported having been hospitalized in the previous year for a reason other than childbirth. While most respondents felt their health was "adequate," a significant number had conditions that required short- or long-term medical care, and this may have contributed to their difficulties in finding employment, housing, and child care.

The incidence of emotional difficulties severe enough to cause the mother to consult a psychiatrist, counselor, or therapist in the preceding 6 months was 14% (20 respondents), and seven mothers (5%) reported having been hospitalized at some time in their lives specifically for mental illness.

The prevalence of reported alcohol use was surprisingly low, with 102 (70%) of the 145 women stating that they

consumed less than one alcoholic drink per day, and only four (3%) stating that their alcohol use had contributed, even slightly, to their present circumstances. Seventeen (12%) reported that alcohol use by others in their household was "a big part" or "the main cause" of their present problems. Thirteen women (9%) reported that their own drug use was "a big part" or "the main cause" of their present problems; 26 (18%) reported that drug use by others had created a significant problem for them. Table 8 shows the number of respondents who used specific drugs during the previous year.

Finally, thirty-one women (21%) reported having been battered or physically abused in the preceding 12 months, while only four (3%) reported that their children had been physically abused in the preceding year.

The estimates of the incidence and prevalence of these health and substance use problems may be falsely low because of underreporting. It is possible, for instance, that the clients perceived that admitting to some of these problems might cause them to be forced out of the shelter, despite our guarantees of confidentiality.

These women appeared to have the range of health problems found in the general population of women in this age group. However, the number who became pregnant as teenagers, who had been recently battered, and who cited drugs as a major cause of their difficulties was impressive, although we have no control group with which to compare the data.

Psychometric Data on School-Aged Children

Descriptive statistics for the psychometric data for the 6- to 12-year-old children appear in Table 9. These 43 children scored significantly below average in WISC-R Vocabulary and Block Design tests. However, these scores were within the range of scores obtained by black children whose parents are in the lowest occupational category of the WISC-R standardization sample.⁸

The mean score for this group of children aged 6 to 12 years on the Goodenough-Harris scoring of Draw-A-Person (DAP) was 85.5, indicating performance about one SD below average. Only 28% of the children scored in the average range or higher on the human figure drawing.

The mean score on the reading subtest of the WRAT-R for these 43 children was 80.9, or more than one SD below the mean for the standardization sample. Only one third of the children were reading at age level. This is consistent with the fact that only 25 (63%) of 40 children were in the correct grade for their age. However, it is somewhat inconsistent with the mothers' reports that 19 (48%) of 40 children had "good" or "excellent" performance in school, 11 (28%) had "average performance," and only 10 (25%) performed "below average" or were not attending school. School information was not obtained for three of the 43 school-aged children.

Absence from school was a major problem for these homeless children: 12 (30%) of 40 had missed 10 or more days of school in the past 2 months and another eight (20%) had missed between 5 and 9 days.

Psychometric Data on Preschool Children

Table 9 presents the scores on the Binet IV Vocabulary subtest, which measures expressive vocabulary performance. These 40 homeless preschool children scored about 1 SD below the mean for the general population. The

children performed even more poorly in the PPVT-R, the test of receptive vocabulary; their mean score of 67.8 was more than two SDs below the mean for the general population. This was comparable with the performance of their mothers, who obtained a mean PPVT-R score of 72.0, indicating extremely poor receptive vocabulary skills.

The 40 preschool children scored below age level on the Yale Cubes, with a mean score of 85.6. These preschool children obtained a mean score of 82.5 on the VMI, indicating below-average performance on design copying. Visual motor immaturity was also shown on the DAP test, in which the mean score (based on the Goodenough-Harris norms) was 79.7; however, only 26 (65%) of 40 of the 3- to 5-year-olds were able to draw anything even "scorable" on the DAP.

Psychometric Data on 2-Year-Old Children

Few 2-year-olds were tested; their mean score on the Binet IV Vocabulary was 45.3, which is within one SD of the population mean. These 2-year-olds performed somewhat below age level on the Yale Cubes, with a mean score of 87.1. Their visual-motor skills were examined with the Yale drawings. Based on a ratio score using developmental age, these children scored slightly below average for their ages (88.7).

Behavioral-Emotional Adjustment of All Age Groups

The mother of each child aged 2 years and older completed the CBCL. Research has demonstrated that differences by social and economic group are minimal on this measure.⁹ Maternal reports on the CBCL for school-aged and preschool children yielded mean scores close to the population mean; CBCL scores for the 2-year-olds were slightly below the mean (Table 9). Four (9%) of the 43 older children had scores above 70, or in the "clinical range," while seven children had scores between 65 and 70 for "Total Problems." Eight (20%) of 40 preschoolers had "Total Problems" scores in the "clinical range." No 2-year-olds were reported to score in the "clinical range" for "Total Problems," "Internalizing," or "Externalizing." On average, they did not show more emotional or behavioral symptoms than 2-year-olds in the CBCL standardization sample.¹⁰

These 145 homeless mothers reported substantial depression, according to the Beck Depression Inventory.¹¹ Although 69 (48%) scored in the normal range, 38 (26%) scored in the mild-to-moderate range, and 38 (26%) scored in the moderate-to-severe range of depression.

Clinical Measures: Three Wishes and HTP Drawings

The school-aged children showed a strong tendency to wish for major changes in their life situation, indicating an intense awareness of their plight as homeless poor people. Thirteen (48%) of the 27 older boys and eight (50%) of the 16 older girls made at least one wish to be out of the shelter or to have a new house. Fourteen (33%) of the 43 older boys and girls wished for money. Four (25%) of the 16 older girls wished for the family to be together and healthy, and 10 (37%) of the 27 boys wished for a car. In contrast, only 11 (28%) of the 40 younger children wished for these major life-style changes affecting the family. Rather, preschoolers showed a strong tendency to wish for more immediate personal pleasures: 11 (85%) of the 13 younger boys and 12 (44%) of the 27 younger girls wished for toys. Only

younger children used their wishes for miscellaneous or minor objects. Thirty one percent of older girls (five girls) and younger boys (four boys) wished for fulfillment of "dreams," such as to be a princess, to be a flower, to visit Disney World, to be a "man," or to "do anything I want."

The older children's drawings of houses were remarkable as expressions of their wish for a comfortable and well-appointed home. Embellishments such as curtains, flower pots, "welcome" signs, and decorative details were common. The children's comments explicitly and poignantly expressed their unhappiness at being homeless and their desire for an inviting house in which to live.

COMMENT

This 1988 survey of homeless families residing in Philadelphia shelters revealed some results that were expected and some that were surprising. Unlike many previous studies of this population, selection of participants was random and should therefore be representative of Philadelphia's homeless population at that time. Because this was a field study, the conditions of data collection were suboptimal. There was often no appropriate area to interview parents or test children. Technical problems (20 of 96 blood specimens clotted before reaching the laboratory) and probable underreporting, especially on issues of drug use and physical abuse, may have hampered data interpretation. A comprehensive assessment of causes and consequences of homelessness would require comparative sampling, which was beyond the scope of this project. Thus, our analysis was limited to descriptive statistics.

The homeless parents interviewed most commonly cited poor living conditions, eviction, or disagreement with a landlord as their primary reasons for homelessness. Thirty-nine (27%) described illegal drug use by themselves or other household members as a major contributor to their current problems. Our overall impression was that the majority of these families lived in marginal situations (ie, doubled up, overcrowded, and/or unsafe), until some recent event (ie, argument, abuse, drug problem, pregnancy, or birth of a baby) forced them to leave. Many families described "choosing" to enter the shelter system as a better alternative than their current housing arrangements.

The children's reported health problems were those most prevalent at this socioeconomic level. Injuries and accidents were commonly reported, as were communicable diseases, such as gastroenteritis and upper respiratory infections. Nine (12%) of 76 children had abnormally high free EP levels. We do not know what proportion of these results represents lead intoxication or anemia from iron deficiency or other causes. However, parents reported that 16 (11%) of 145 children had been diagnosed as having lead poisoning in the previous year.

Despite the health problems described by parents, most believed that their children were in good or excellent health. Although most families could identify a source of care, almost half named a hospital emergency department or clinic rather than local health centers or individual practitioners.

The homeless mothers had a high degree of parity and, on average, had delivered their first children while teenagers. Their level of schooling was low and they performed poorly on a test of receptive vocabulary. They tended to suffer from depression, and many reported be-

ing abused by husbands or male companions. In addition to self-reported emotional difficulties requiring recent hospitalization, many mothers reported significant chronic medical problems.

The children had poor school attendance records and scored poorly on intelligence tests and receptive vocabulary tests, as well as having impaired ability to perform visual-motor skills. The older children expressed yearnings for a stable family structure, a desire to leave the shelter, and hope to have a home.

The problems of the homeless are protean and complex, just as the causes are multifactorial. The shelter system, created to supply emergency and temporary housing, is often the residence for homeless persons for prolonged periods. The health of the resident mothers was characterized by depression and multiparity as well as the presence of serious psychiatric and medical illnesses for some. The resident children tended to suffer serious injuries, such as burns, and many may have had anemia and/or high blood lead levels. The children scored poorly on developmental and psychological tests.

Some of the problems of homeless persons living in shelters that need to be addressed include lead toxicity, anemia, and accidents of children, as well as substance abuse and physical abuse of mothers. The psychological and developmental needs of homeless children may require special programs if these deficits are to be overcome.

This work was supported by a grant from the University of Pennsylvania Research Foundation, the United Way, the Manealoff Foundation, and the Robert Wood Johnson Clinical Scholars Program.

Drs Barnes and Finkelstein were Charles A. Dana Foundation Scholars at the time of this study, and Dr Parker was a Robert Wood Johnson Clinical Scholar at the University of Pennsylvania School of Medicine, Philadelphia.

References

1. Bassuck EL, Rubin L, Lauriat AS. Characteristics of sheltered homeless families. *Am J Public Health*. 1986;76:1097-1101.
2. Alperstein G, Rappaport C, Flanigan JM. Health problems of homeless children in New York City. *Am J Public Health*. 1988;78:1232-1233.
3. Miller DS, Lin E. Children in sheltered homeless families: reported health status and use of health services. *Pediatrics*. 1988;81:668-673.
4. Acker PJ, Fierman AH, Dreyer BP. An assessment of parameters of health care and nutrition in homeless children. *AJDC*. 1987;141:388.
5. Wright JD, Weber E. *Homelessness and Health*. Washington, DC: McGraw Hill International Book Co; 1987:112.
6. *Homelessness in Philadelphia: People, Needs, Services*. Philadelphia, Pa: Philadelphia Health Management Corporation; 1985.
7. Rescorla L, Parker R, Stolley PD. Ability, achievement and adjustment in homeless children. *Am J Orthopsychiatry*. In press.
8. Kaufman AS, Doppelt JE. Analysis of WISC-R standardization data in terms of the stratification variables. *Child Dev*. 1976;47:165-171.
9. Achenbach TM, Edelbrock CS. Behavioral problems and competencies reported by parents of normal and disturbed children aged four through sixteen. *Monogr Soc Res Child Dev*. 1981;46.
10. Achenbach T, Edelbrock CS, Howell C. Empirically-based assessment of the behavioral/emotional problems of 2-3-year-old children. *J Abnorm Child Psychol*. 1987;15:629-650.
11. Beck AT. *Depression: Causes and Treatment*. Philadelphia, Pa: University of Pennsylvania Press; 1987.

Children in and of the Streets

Health, Social Policy, and the Homeless Young

James D. Wright, PhD

The nature of homelessness in the United States was transformed dramatically in the 1980s. Once dominated by older, largely white, broken-down, alcohol-abusive men, today's homeless population contains a sizable fraction of women and children.^{1,2} Indeed, women, children, and youth now comprise perhaps three eighths of the total.³ What are the effects of homelessness on the health and well-being of children? How do these effects compare with those of simply being poor? What are the likely long-term consequences of these effects on the ability of homeless children to mature normally and to achieve productive, independent adult lives? Scholars have been researching these and a range of related questions for the past 10 years, and the results are not encouraging.

That homelessness and extreme destitution exist at all in a society so affluent as ours is shocking. That increasing numbers of the homeless are women, children, and youth—groups that society has traditionally obliged itself to protect—further offends one's sensibilities. It is easy enough (too easy, perhaps) to be indifferent to the plight of Skid Row drunks, but indifference to the circumstances of homeless women and their children requires an unmistakable coldness of heart.

There are many good reasons for the pediatric community to be concerned about the health status of homeless children and youth. Poor physical health and especially chronic physical illness contribute to the cycle of poverty, whereby sick, homeless children of today become the unemployable, destitute, and homeless adults of tomorrow. Recurring health problems of even minimal severity disrupt school attendance and interfere with studying and homework activities. Chronically poor health or physical disabilities will interfere with, if not preclude, normal labor force participation and, with it, the ability to lead an independent adult existence. Thus, poor health is one mechanism by which homelessness reproduces itself in subsequent generations.

Every aspect of a homeless existence compromises physical health to some degree or at least complicates the provision of adequate health services; this is true of both children and adults. Life without shelter corrodes physical well-being in 1000 different ways, most of them too obvious to belabor here. Much that ails children requires little more than a day or two at home in bed—but what if you have neither home nor bed? Nothing is quite so therapeutic to an ailing child as the tender, loving care of a

parent. But homelessness is a mean existence in which tenderness, love, and care are often in short supply. Further compounding the difficulties are an often inadequate diet, uncertain sleeping location, limited facilities for daily hygiene, exposure to the elements and to the social environment of the streets, extended periods on one's feet, an absence of support networks to draw on in times of illness, extreme poverty, and on through a long list.⁴⁻⁸

Among homeless children and youth in particular, there are additional complications. The shelters for women and children may well present optimal conditions for transmitting the infectious and communicable diseases of childhood.⁹ A second problem is that immunization protocols are frequently found to be incomplete or nonexistent¹⁰; a third is the possibility of widespread physical and sexual abuse. Among homeless teens already out on their own, rates of pregnancy, sexually transmitted diseases, and alcohol and drug abuse and the associated health problems are all inordinately high.^{11,12}

Many of the health and nutritional problems of homeless children and youth stem from the extreme poverty of their parents. (The notion that most, many, or even a sizable number of the homeless are "homeless by choice" has been thoroughly discredited by the research of the past decade.¹³) The evident role of poverty in creating homelessness also implies that the recent increases in the numbers of homeless women (and therefore homeless children) are a consequence of the so-called feminization of poverty about which much has recently been written.¹⁴⁻¹⁶ In 1984, approximately two thirds of the nation's poor adults were women¹⁴; this proportion is increasing. As a consequence, the poverty rate among American children is about twice that of adults. Four of 10 poor people in the United States today are children.¹⁷

Poverty is a well-known "risk factor" for poor health among children and certainly contributes to the poor health of homeless children. Poverty is strongly correlated with infant mortality in every study that has inquired into the matter, and is also associated with a range of morbidities as well. Homeless children, being poor, must suffer the health consequences of their poverty as well as those resulting from their unsettled living conditions.

Although the effects of poverty on infant mortality are well documented, no study has yet examined the rate of infant mortality among the homeless poor. Among homeless adults, mortality is exceptionally high^{8,18}; indeed, the average age at death for various samples of the homeless is reported to be in the range of 50 to 55 years. It is, therefore, a safe bet that homeless infants also die prematurely at a rate substantially higher than average, although, as

Accepted for publication December 5, 1990.

From the Department of Sociology, Tulane University, New Orleans, La.

Reprinted from *AJDC* (1991;145:516-519).

indicated, this point has yet to be researched.

One mechanism that links poverty to poor health is inadequate nutrition—a problem for poor children in general and the homeless poor in particular. Specific studies of dietary intake or nutritional deficiency disorders among homeless persons, whether child or adult, are relatively rare. Winick¹⁹ has noted that the menu used by the city of New York in its shelters for homeless persons supplies at least one third of the daily requirements for all known nutrients, and is to that extent “sufficient.” These diets, however, are typically high in cholesterol, fat, sugar, salt, and starch, so while they may well offer adequate caloric intake, they are far short of optimal. As for the nutrition of those homeless who do not avail themselves of shelters and soup kitchens and who eat mainly what they can scavenge from street sources, nothing further need be said.

A few studies have inquired into the prevalence of nutritional deficiency disorders among homeless children; as would be expected, the rates are high. I¹¹ reported that 2.2% of homeless children who received care during the first year of the National Health Care for the Homeless program were diagnosed as anemic; this is twice the rate for “normal” children seen in ambulatory pediatric clinics nationwide.²⁰ An additional 1.6% of the homeless children had nutritional deficiency disorders other than anemia (most of them vitamin deficiency disorders); among children in general, such deficiencies are practically nonexistent (Wright,¹¹ Table 1). About 2% of the homeless children studied by Miller and Lin²⁰ were diagnosed as having “growth problems,” possibly secondary to dietary insufficiencies, similar to the results reported by Alperstein et al.¹⁰

General morbidity among homeless children appears to be much more widespread than among children in general or among poor children in particular. Miller and Lin²⁰ studied 158 homeless children in Seattle, Wash, and reported that “although the majority of the children were considered to be in good or excellent health, the proportion whose health was described as ‘fair’ or ‘poor’ was four times higher than in the general US pediatric population.”^{20(pp671-672)} This study also found a high prevalence of abnormal anthropometry and immunization delays within this population. Homeless children appear to overutilize emergency department services, underutilize preventive health services, and have far fewer dental visits than the general pediatric population. Similar results for homeless children in Boston have been reported by Bassuk et al.,²¹ and for homeless children in New York by Alperstein et al.¹⁰

I¹¹ compared the health problems of homeless children seen in the National Health Care for the Homeless program with those of children included in the National Ambulatory Medical Care Survey. Nearly all disorders are more common among the homeless group. About 7% of the homeless children were found to have scabies and lice infestations, for example, compared with 0.2% of the National Ambulatory Medical Care Survey children; upper respiratory infections were about twice as common, skin disorders four times as common, poor dentition 10 times as common, etc. Homeless children were also more likely than normal children to suffer from chronic physical disorders. Similar patterns were observed among homeless teenagers as well.¹²

Mental health problems of homeless children have been studied in depth by Bassuk et al.²¹ and Bassuk and Rubin.²² Depression, developmental delays of varying severity, anxiety, and learning difficulties are reported to be distressingly common. Psychiatric morbidity is also widespread among homeless adults.^{23,24}

The general configuration of illness among homeless children is similar to that of children in general. That is to say, the health problems faced by homeless children are not exotic or unusual; they are, rather, the same health problems that all children face. In all studies, by far the most common disorders observed among homeless children are minor upper respiratory infections, followed by minor skin ailments, ear disorders (mostly otitis media), then gastrointestinal problems, trauma, eye disorders, and lice infestations. In most cases, differences in the rates of disorder between homeless boys and girls are reported to be minor.

Differences between homeless children and children in general, in contrast, are often large and in some cases dramatically large. Although the general pattern of illness among homeless children is not atypical of children’s illnesses in general, the comparative rates of occurrence are often inordinately elevated.

Children, clearly, are not immune to the deleterious effects of homelessness on physical health. That many of these children are over age 5 years and therefore required to attend school, where their illnesses can then circulate to other children, is an additional point of concern.

It is important to stress here that the best available studies of the effects of poverty on child health report relatively slight differences in the *prevalence* of most disorders between poor and nonpoor children, whether chronic or acute.^{25,26} The larger differences are found in the ensuing *consequences* of disease. Differentials on the order of those reported in the studies of homelessness and child health are not to be found anywhere in the published literature on poverty and child health. The evidently disproportionate rate of illness observed among homeless children, in short, is not just a consequence of their impoverished circumstances. Homelessness is an independent and quite consequential risk factor in its own right.

The life chances of homeless children are obviously not bright to begin with. They are saddled first with the burdens of poverty and then with the unique burdens of not having a safe, stable place to live. The effects of homelessness on school performance and intellectual development are now well-known,²² as are the effects on various physical disorders, both acute and chronic. Among the many good reasons to “do something” about homelessness is that homelessness makes people ill.

These days, the people being made ill by homelessness are increasingly children and youth, who comprise a tenth or more of the total homeless population. To be a poor child is one thing, but to be poor *and* homeless is a thing apart. It is hard to imagine a social environment less conducive to health or normal maturation and development.

Pediatricians at the New York City Children’s Health Project have identified what they call the “homeless child syndrome,” which comprises “poverty related health problems, immunization delays, untreated or undertreated acute and chronic illnesses, unrecognized disorders, school, behavioral, and psychological problems,

child abuse and neglect."²⁷ It is not true that all homeless children exhibit all aspects of this syndrome. However, most homeless children do exhibit one or more of these problems and disorders; at the very least, they are more commonly observed among homeless children than among children in general or even those at the poverty level.

Knowing how and to what extent homelessness affects the health of children does not in itself tell us what needs to be done. Most of what has been done to date is along the lines of amelioration. There is an evident need to continue such programs: aggressive screening of homeless children for health disorders and proper treatment and health care once problems have been identified. But here, as in many other areas of public health, the only long-term solutions are to be found in prevention. We will avoid the negative consequences of homelessness on the health of children only when we find a way to prevent children from being homeless in the first place.

Sad to say, this obvious truth is much easier to state than to act on. Homelessness is a complex problem rooted in recent trends in the political economy of the nation.¹³ A rising poverty rate coupled with a serious and ongoing decline in available low-income housing has served to price an increasingly large segment of the urban poverty population out of the private housing market.²⁸ Inflation has reduced the purchasing power of Aid to Families with Dependent Children and other welfare programs to the point where the welfare-dependent can no longer maintain stable residences with their monthly payments.² In the absence of other sources of support, mothers with children dependent on Aid to Families with Dependent Children find themselves virtually consigned to homelessness in all but the most generous states, unless they are also among those fortunate enough to receive a federal Section Eight housing voucher.

An aggressive, broad-scale federal assault on homelessness in all its various manifestations would easily add several tens of billions of dollars to the annual federal expenditure on housing, health, and human services.²⁹ No one who has followed the Washington, DC, scene closely for the past few years would consider this the least bit likely anytime in the coming decade. The prospects for community-based local programs are scarcely brighter, since most of the cities and states face budget problems every bit as serious as the federal problem. That would seem to leave the private sector as the most promising source for new programs, but the limit may well have been reached here as well. In fact, approximately three quarters of the total national expenditure for assistance to the homeless already comes from the private sector, principally the churches, and one is entitled to wonder just how much wattage can be cranked from the "thousand points of light." Thus, for the foreseeable future, we will have to content ourselves with programs of amelioration such as those embodied in the Stewart B. McKinney Homeless Assistance Act, knowing full well that such measures do not and cannot provide any final solutions to this problem.

The large number of children now being seen on the streets and in the shelters and other facilities providing services to homeless people means that the homelessness of the 21st century is already being created today. As this is being written, the lives and futures of many tens of thou-

sands of children around the nation are being destroyed by forces over which they have no control. The Children's Defense Fund estimates that "more children die each year from poverty-related causes than traffic fatalities and suicides combined,"³⁰ and while this is probably an exaggeration, it is nonetheless an exaggeration that makes a point. It is useful, if troubling, to ask, What does the very existence of homeless children say about us as a nation? What image does this present to the world?

In February 1987, I appeared at hearings before the House Select Committee on Children, Youth, and Families to testify to the effects of homelessness on the physical health of children. Among the several witnesses present at the hearings was a lovely 12-year-old Hispanic girl living with her mother and three siblings at one of the large welfare hotels in midtown Manhattan. In the course of her testimony, this young woman remarked, "If I could have anything that I could want, I wish that we could have our own apartment in a nice clean building and a place that I could go outside to play in that is safe. I want that most of all for me and my family." A clean place to live and a safe place to play do not seem like too much to ask. These are not the rapacious demands of some welfare-dependent drug addict, but the plaintive wishes of a young child to have those things that normal children have. As the hearings closed, the thought occurred to me, What kind of world is this, where such simple things can only be a dream to some children? As a kind and generous nation, are we truly prepared to let this continue?

This report has been adapted from a previously published study by Dr Wright.³¹

References

1. Lam J. *Homeless Women in America: Their Social and Health Characteristics*. Amherst, Mass: University of Massachusetts; 1987. Thesis.
2. Rossi PH. *Without Shelter: Homelessness in the 1990s*. New York, NY: Priority Press; 1989.
3. Wright JD. The worthy and unworthy homeless. *Society*. 1988;25:64-69.
4. Brickner PW, Scharer LK, Conanan B, Elvy A, Savarese M, eds. *Health Care of Homeless People*. New York, NY: Springer-Verlag NY Inc; 1985.
5. Brickner PW, Scharer LK, Conanan BA, Savarese M, Scanlan BC, eds. *Under the Safety Net: The Health and Social Welfare of the Homeless in the United States*. New York, NY: WW Norton; 1990.
6. Institute of Medicine. *Homelessness, Health and Human Needs*. Washington, DC: National Academy Press; 1988.
7. Wright JD, Brickner PW. The health status of the homeless: diverse people, diverse problems, diverse needs. Presented at the annual meeting of the American Public Health Association; November 15, 1985; Washington, DC.
8. Wright JD, Weber E. *Homelessness and Health*. New York, NY: McGraw-Hill International Book Co; 1987.
9. Gross TP, Rosenberg ML. Shelters for battered women and their children: an under-recognized source of communicable disease transmission. *Am J Public Health*. 1987;77:1198-1201.
10. Alperstein G, Rappaport C, Flanagan J. Health problems of homeless children in New York City. *Am J Public Health*. 1988;78:1232-1233.
11. Wright JD. Homelessness is not healthy for children and other living things. *Child and Youth Services*. 1990;14:65-88.
12. Yates G, MacKenzie R, Pennbridge J, Cohen E. A risk profile comparison of runaway and non-runaway youth. *Am J Public Health*. 1988;78:820-821.

13. Wright JD. *Address Unknown: Homelessness in Contemporary America*. Hawthorne, NY: Aldine de Gruyter; 1989.
14. Sidel R. *Women and Children Last: The Plight of Poor Women in Affluent America*. New York, NY: Viking Penguin; 1986.
15. Ehrenreich B, Piven F. The feminization of poverty. *Dissent*. 1984;31:162-170.
16. Duncan G. *Years of Poverty, Years of Plenty*. Ann Arbor, Mich: Institute for Social Research Press; 1984.
17. US Department of Commerce. *Money Income and Poverty Status in the United States*. Washington, DC: Bureau of the Census, Current Population Reports; 1987. Consumer Income Series P-60, Number 161.
18. Alstrom CH, Lindelius R, Salum I. Mortality among homeless men. *Br J Addict*. 1975;70:245-252.
19. Winick M. Nutritional and vitamin deficiency states. In: Brickner PW, Scharer LK, Conanan BA, Savarese M, Scanlan BC, eds. *Health Care of Homeless People*. New York, NY: Springer-Verlag NY Inc; 1985;8:103-108.
20. Miller D, Lin E. Children in sheltered homeless families: reported health status and use of health services. *Pediatrics*. 1988;81:668-673.
21. Bassuk E, Rubin L, Lauriat A. Characteristics of sheltered homeless families. *Am J Public Health*. 1986;76:1097-1101.
22. Bassuk E, Rubin L. Homeless children: a neglected population. *Am J Orthopsychiatry*. 1987;57:279-286.
23. Bassuk E. The homeless problem. *Sci Am*. 1984;251:40-45.
24. Wright JD. The mentally ill homeless: what is myth and what is fact? *Soc Problems*. 1988;35:182-191.
25. Egbuono L, Starfield B. Child health and social status. *Pediatrics*. 1982;69:550-557.
26. Newacheck P, Starfield B. Morbidity and use of ambulatory care services among poor and nonpoor children. *Am J Public Health*. 1988;78:927-933.
27. Today's Child. 1988. 'The homeless child syndrome.' *Today's Child*. 1988;2:4.
28. Rubin B, Wright JD, Devine JA. Unhousing the urban poor: the Reagan legacy. *J Sociol Soc Welfare*. In press.
29. Wright JD. Science, passion and polemics. *Society*. 1989;26:21-23.
30. Oberg C. Pediatrics and poverty. *Pediatrics*. 1987;79:567-568.
31. Wright JD. Poverty, homelessness, health, nutrition, and children. In: Kryder-Coe J, Salamon L, Molnar J, eds. *Homeless Children and Youth: A New American Dilemma*. New Brunswick, NJ: Trans-action Books; 1990.

Children's Services in an Era of Budget Deficits

Barbara B. Blum, Susan Blank

It is virtually impossible to address the issue of how to improve the care of the nation's poor children without confronting the question of the resources society is willing to spend on those children. As a first step in examining that question, I suggest we visualize an increasingly common sight in contemporary hospitals: a premature, low-birth-weight infant, born with medical complications and hooked up to a life-support system. The baby's mother is penniless; the hospital, or, in other words, society at large will spend thousands of dollars to give the infant all the medical assistance he or she needs to breathe and eat and develop.

What the scenario tells us is that in this instance, society has concluded that almost no amount of money is too much to spend to save the life of a child. The statement is a powerful one. Granted, the work of the neonatal care unit reflects society's stake in preserving any human life, but it is fair to say that commitment assumes a special force and urgency when its subject is a *young* life. The resources we devote to premature infants born into poverty suggest that we honor the potential to develop and grow in any child, however frail or disadvantaged.

But that commitment to children has its limits. If we pursued it to its logical conclusion, we would not live in a society that cares for the baby until he or she can leave the neonatal unit and then allows the infant to go home to an apartment infested with rats. When the infant reaches school age, we could not be satisfied to let the child begin an education in a badly overcrowded and dilapidated building where it takes years to fix a leaky roof. We would also not be able to live with the fact that the emergency department will be that child's only source of health care.

Clearly, almost no one actively endorses such a level of risk to children's health and development, yet childhood deprivation persists and worsens. One reason is the isolation of poor children. Despite growing attention to childhood poverty in the United States, many low-income children live in neighborhoods separated from a mainstream society that reads about them in newspapers but does not personally witness their plight.

Another reason for the neglect of children is the racism and classism that pervade a supposedly egalitarian society. Racism and classism make it easier to ignore children in poor neighborhoods; indeed, racism and classism may even make it more attractive to care for babies in the highly technological professionalized neonatal environment than in the communities to which they return.

However, efforts to make poor children more visible to the public at large will be of little consequence unless underlying questions about resources can be answered. Growing state and federal budget deficits confront children's advocates with a seemingly open-and-shut objection to greater investments in services. Children do have unmet needs, concede the budget cutters, but there is simply no more money. Government, they contend, is in much the same position as a poor family that needs every penny to make it through the week. When short-term budgets are tight, long-term prevention gets defined as a luxury.

For the family, pinched resources manifest themselves as hesitating to take a child to the doctor until an illness grows sufficiently serious to require treatment in the emergency department. For society, budget constraints mean spending more on shelters and welfare hotels after people become homeless than on raising the public assistance allowance, or they mean providing expensive neonatal care to some women because prenatal care is not universally available. Just as the family scrapes enough together to buy a used car, but has nothing left for its upkeep, so society funds the popular Head Start program but dissipates its gains by failing to provide the high-quality education that would reinforce the enriched early childhood experience. Scarce resources must be reserved for averting or alleviating crises; prevention and long-term maintenance are worthy but unattainable luxuries. These principles, argue supporters of fiscal austerity, are as true for government as they are for families.

However persuasive, the analogy is flawed. A wealthy society with its government in budget straits is not the same as a family in budget straits. The government simply has more choices. To pay for better services to meet children's basic needs, this wealthy nation can raise taxes. Used for better prenatal care or drug treatment for pregnant addicts or decent housing allowances, the resources would be money well spent.

At this juncture, however, another set of objections to investing in services must be confronted. There are two meanings to the phrase "money well spent," and we have thus far focused only on the first, the sense that resources will be used for worthwhile ends. When the services are better health care, housing, and early childhood education, their value is easy to defend. It is the second meaning of "money well spent," the concept of *money used efficiently*, that raises more difficult questions.

The source of the difficulty is that as currently structured, our human services system does waste resources. To a degree, the problem is the one already discussed: the overemphasis on costly crisis intervention at the expense of prevention. However, the crisis mode is not the only

source of inefficiency. Another is the lack of accountability for public funds spent on human services. The problem is familiar. A program is launched, funds are allocated, and, once established, the program continues to receive support year after year. The principal measure of the program's performance is whether it follows certain procedures. Too little effort is made to find out whether the program is making a difference for children and families. As the public sees it, tax dollars disappear into a void.

In fact, considerable progress has been made on this front, and to a certain extent public perceptions have not caught up with what has been accomplished. We must recognize that this country is the beneficiary of more than a decade of large-scale experimental research efforts that have used controlled studies to measure the effects of various programs. Even when it is impossible to conduct sophisticated treatment/control group studies, as is the case with most programs, officials recognize more and more the value of regularly examining indicators on families at risk. In the absence of controlled studies, it is of course impossible to know precisely how much change can be attributed to particular interventions and how much to external factors. Nevertheless, as new programs are tried, indicators do offer practitioners, policymakers, and the public a general sense of whether initiatives are moving in the right direction.

One of the many examples of this new interest in program accountability comes from the Council of Governors' Policy Advisors (formerly the Council of State Policy and Planning Agencies), an affiliate of the National Governors' Association, which, in the summer of 1990, completed what it calls a Policy Academy on children and families at risk. The academies are intensive technical assistance conferences for teams of top state officials who meet to develop a plan for solving complex policy problems. The teams taking part in the recent academy series on children and families devoted a great deal of time to the issue of how to gauge the success of the plans they developed by examining changes in specific indicators, such as rates of low-birth-weight infants or of teen pregnancy. We need to infuse much more of the planning associated with human services with this approach, which moves beyond mechanistic, procedural measures of how a program functions to a more probing assessment of whether it seems to be effecting change.

Another, still more fundamental source of inefficiency in the way money is spent to help families is the very structure of the country's health and human services systems. These systems are both overly centralized and fragmented. Multiple agencies with multiple funding streams are charged with specialized responsibilities for serving the same families. These families are neither equipped nor inclined to sort through their life problems and fit them into boxes constructed by government. Consequently, they often do not know which agency they should approach for help. When they do locate the right system, they often discover that services are offered only at central, inconvenient locations.

Families pay a high price in frustration and discouragement when they try to negotiate the service maze. Society pays a high price when the maze keeps multiproblem families from getting access to the help they need, thereby allowing their problems to worsen. Government wastes

precious resources in duplicative intake processes and reporting requirements and in the time and energy spent piecing together funds from different sources to support single programs.

How should the system function? There are a variety of ways to conceptualize what reform would look like. Many of us who are familiar with social services in New York City like to point to an exemplary program, the Center for Family Life in the low-income community of Sunset Park, Brooklyn, to illustrate what could be done. The center, which is supported by a mixture of private and public funding sources, is open to any family in the neighborhood with children. Through the center, families have access to a rich array of services, including a therapeutic nursery program, job search assistance, parenting education, and many others.

Regardless of the reason why someone first walks through the center's door, staff members are always alert to other kinds of help that that person *and* his or her family may need. While a child may enroll in the center's after-school program, the mother may later avail herself of its counseling services, turn to its employment program for help in finding a job, and, as she comes to feel at home, bring her whole family to its community dinners. The center client, say its staff, is typically not an individual, but the entire family. Every effort is made to avoid artificial distinctions between, for example, "child welfare families," "substance abusing families," and "families receiving public assistance." Instead, the criterion for service is, What help does the family need to function well?

Around the country are hundreds of local programs that share the center's vision of holistic services. They operate with many different funding sources, from many different bases, serving many kinds of families and communities. However, the efforts of these innovative community-based programs are overshadowed by the large public bureaucracies that poor families must typically turn to for assistance. The question is, can these bureaucracies possibly be reconfigured so that the maze becomes a neighborhood center? The center would be friendly and convenient, its mode of operation would be to keep a limited number of staff members closely and continuously involved with one family, and, finally, it would give the family easy access to many different kinds of key services, such as income and housing assistance, preventive health care and child welfare programs, employment and training initiatives, and drug treatment programs.

In New York City, where children's advocates have repeatedly called for integration and decentralization of publicly funded services for poor families, there is now some ground for optimism. A project called Agenda for Children Tomorrow (ACT), which was privately initiated but is now supported in part by the mayor's office, is beginning to map service needs and usage patterns in 10 of the city's poorest neighborhoods. The mapping is the first step in a plan to build a neighborhood-based service system in these districts and eventually throughout the city. It will take time, patience, skill, political commitment, and a generous portion of good luck to create coordinated community services in New York City. However, those of us who have been involved with ACT are gratified that at last a systematic effort to realize the vision is under way.

Local reform efforts like ACT, however, cannot proceed in a vacuum. Initiatives to reconfigure services at the community level are much more likely to succeed if they enjoy a supportive policy environment at the state and national levels. Unfortunately, the federal environment often chills and constricts, rather than nurtures, state and local experimentation. As with almost all generalizations, this one demands qualifications. First, most federal officials want to foster flexibility. However, legislative and institutional practices frequently obstruct that good impulse. Second, some developments of the 1980s, including, for example, the use of block grants or the new latitude given to states to create their own welfare-to-work programs, did favor service coordination. Too often, however, the freedom given to states and localities by the federal government was undercut by funding cuts and freezes. More importantly, despite block grants and special programs that encourage coordination, state and local officials are still met at every turn with federal policies that encourage them to think categorically rather than holistically. We need to look no further than the Congressional committee structure for an example of this problem.

Congressional staffers, when approached with ideas for new federal initiatives that crosscut conventional program areas, typically acknowledge that the House and Senate committee structures are hurdles that must be surmounted if more integrated programs are to be authorized. Because Congress should serve as an aid, not an obstacle, to decategorization, careful thought is needed about how to rationalize the way the committees do business.

At best, however, improvements will be very gradual. Thus, we must also consider if there are ways to give states more immediate relief from the constraints of federal policies. One answer may be to modify the assumptions that underlie decisions about whether to grant states waivers for federal regulations on programs for children and families—to presume that states should be permitted flexibility in following the rules established for categorical funding unless there is good evidence to the contrary.

A starting point for this more short-term reform might be to look into the work of a panel that until recently was known as the Low Income Opportunity Control Board. Established in 1987 under the White House Office of Policy Development, the panel has been renamed the Economic Empowerment Task Force and will operate under the direction of Housing Secretary Jack Kemp. The task force is an unusual federal entity in that it brings together assistant secretaries from the wide range of departments that oversee social welfare programs. Its mission is to examine ideas for state-sponsored demonstrations—programs established for the purposes of evaluation—and a key element of that work is to review state requests for waivers to conduct them. With representatives from all the agencies from which a state would be likely to need waivers, the board offers a shortcut to states that would otherwise need to apply to multiple agencies to launch a complex demonstration.

The board's new name and leadership suggest there is probably federal interest in broadening its authority to take advantage of its unusually wide-ranging representation. There are several good possibilities for such an expansion. Perhaps the task force could become more pro-

active in encouraging states to undertake demonstrations. Also, rather than confining itself to demonstrations, the task force could also simplify the waiver process when states wish to apply for experiments that involve administrative, nonresearch activities. In addition, the rule now followed by the task force that waivers will be approved only for demonstrations that are revenue neutral should be modified. Because this stipulation ignores the start-up costs associated with almost all demonstration programs, it places unnecessary restraints on experimentation.

Expanding the functions of the task force is one possible route that the federal government could take to make it easier for states to innovate; there are clearly many others that would likewise offer states greater flexibility in the use of funds, leaving them in a stronger position to support locally based, coordinated services.

States, however, do not inherit all their problems in this area; some are indigenous. Like the federal government, states have legislative committees that carve the needs of high-risk families into pieces that are difficult to fit together. Similarly, states have their own centralized bureaucracies that take too many decisions out of the hands of communities.

There are, however, signs of change. In many ways, states are now exploring possibilities for restructuring. For example, the American Public Welfare Association has formed a commission of top state welfare and child welfare officials to recommend reforms in the child welfare system, and that group strongly supports the creation of a more integrated service system for children and families. Efforts to build integrated family services are already under way in Iowa and in states taking part in a special child welfare initiative sponsored by the Annie E. Casey Foundation.

In addition to the federal and state policy environments, a third sector of our society, the professional community, must change if more efficient and helpful local service systems are to be developed. The challenge to professionals has two dimensions, each reflecting one of the two structural problems in contemporary health and human services systems discussed earlier: their fragmentation and overcentralization.

First, to heal the system's fragmentation, the psychologist, child welfare worker, nurse, and many other professionals must be willing to move outside the confines of their own disciplines. The social worker cannot become a public health specialist, but perhaps he or she can become more attuned to the way the public health specialist views families and their needs. The employment specialist need not be a child welfare worker, but perhaps he or she should become more conversant in the language that child welfare workers speak.

Second, to decentralize systems and make them more accessible to clients, professionals must be willing to hand some of the control they now exercise over to local leaders and, ultimately, to families. Families must have a choice in the way services are designed, provided, and prioritized. If they say they prefer family day care to center-based programs, if they believe the neighborhood needs drug treatment more than recreational services, and if they conclude that a single mothers' group established for

parenting education purposes should focus less on child-rearing and more on how to find a job, then professionals should listen.

In fact, many professionals are beginning to collaborate across disciplines and shape programs in response to what families themselves say they need. In some cases, these professionals have the wholehearted backing of their agencies, but, overall, more top-down institutional support is needed for this kind of innovation.

In addition, workers must be *trained* to function in a more multidisciplinary system. On-the-job innovation is heartening, but many of the fresh approaches now being taken by health and human service professionals ought to become the standard practice taught to students before they begin their careers. Equally important is orienting current workers to the challenges and demands of coordinated and locally based service provision.

Because there is a tendency to oversell every solution to poverty problems in this country, we should be well aware that, however desirable, a more coordinated and decentralized service system is no panacea. First, while coordination should save precious resources, it will also require new investments in the short run. Changing service systems requires planning, training, and consulting, and none of these activities is without its price tag.

Second, and even more critical, is the fact that clustering services and even clustering them in neighborhoods is

likely to be a necessary but insufficient step to bring about the full measure of systemic change that should occur. Services can be integrated, but if they are of poor quality or if there are simply not enough of them, little has been gained.

On the other hand, the potential benefits of coordination are undervalued if there is an assumption that the *way* in which services are provided has little or nothing to do with their *substance*. In fact, the kind of reconfiguration discussed here could improve the quality and possibly even the quantity of family interventions. Convenient, accessible services provided by workers who think about the needs of the entire family constellation would axiomatically be better services. As to the question of supply, if integration reforms created systems that made more sense to workers and families than do current arrangements, the improved morale could, in turn, help to convince the public to invest the dollars needed to create a decent supply of services for children at risk.

Perhaps it is idealistic to expect that the country can create a new and vital service system during the next 10 to 20 years, but there are times when idealism is the only appropriate response to reality. In 1991, when large numbers of children are vulnerable to poverty, homelessness, ill health, and developmental disabilities, it is time, if not past time, for bold and creative systemic change.

What Will It Take to Fully Protect All American Children With Vaccines?

Alan R. Hinman, MD, MPH

● Although 95% of children have had a full course of vaccines by the time they enter school, immunization levels among poor inner-city preschoolers may be substantially lower. Among the factors responsible for the disparity are the lack of a uniform data system to identify children who need vaccine; missed opportunities to offer immunizations; overinterpretation of contraindications; and administrative barriers to immunization. Remedies lie in a multifaceted approach: a tracking system that will prompt a reminder and then sound an alarm when an immunization is overdue; means of informing parents, probably best accomplished by an outreach worker of the same racial or ethnic background as the parent; removal of administrative barriers and increased access to services; incentives, either positive or negative, to raise the priority of immunizations; and more education for health care providers to ensure that they understand contraindications and do not miss opportunities to offer vaccines. Other possibilities are "express lane" services to immunize all children who come to a health care provider and the delivery of immunizations in child care settings and in programs such as Women, Infants, and Children, and Aid to Families With Dependent Children.

Recent newspaper and journal articles headline the continuing occurrence of measles outbreaks in this country and report that a high proportion of young children are unvaccinated. At the same time, the Centers for Disease Control, Atlanta, Ga, describes immunization levels in school-age children as being at an all-time high, with more than 95% of students having records documenting receipt of a full course of vaccines. In this article, I will assert that both of these seemingly contradictory statements are true, attempt to describe some of the factors responsible for the present situation, and consider possible remedies.

BACKGROUND

Current recommendations call for a child to receive eight different vaccines or toxoids (many in combination form and all requiring more than one dose) in a total of five visits for immunization between birth and school entry. The basic immunization schedule of the US Public Health Service's Immunization Practices Advisory Committee is summarized in Table 1.¹ Two discrepancies between this committee's recommendations and those of the American Academy of Pediatrics Committee on Infectious Diseases (the "Red Book"

Committee)² are that the Red Book Committee recommends two immunization visits during the second year of life (at 15 months for measles, mumps, and rubella [MMR] and *Haemophilus b* conjugate vaccines and at 18 months for diphtheria and tetanus toxoids and pertussis vaccine [DTP] and oral polio vaccine [OPV]) and also recommends that the second dose of MMR vaccine be given at approximately 12 years of age, rather than at 5 to 6 years of age, along with DTP and OPV. Thus, a child being immunized according to the Red Book schedule would have six immunization visits before school entry (and a seventh later).

Half of US children receive are immunized by private physicians (commonly pediatricians) as part of overall well-child preventive care. Their parents either pay for this service or have it paid for by third-party reimbursement mechanisms. The current private-sector price for the vaccines each child should receive totals \$198.55; with an estimated cost per physician visit of \$15, the total for full immunization would be \$303.55, following the Red Book schedule.

The other half of US children receive immunizations in the public-sector, often as a specific, categorical service independent of other preventive care services. Their parents do not pay for the vaccine received (which at current public sector prices totals \$92.53) but may pay a small fee for administration. These children are likely to be members of racial or ethnic minorities and to be socioeconomically disadvantaged.

Since passage of the Vaccination Assistance Act of 1962, a federal grant program, administered by the Centers for Disease Control, has provided financial and technical assistance to supplement state and local health department efforts to provide the public sector immunizations. Grant funds typically provide half of the public-sector vaccines (approximately one quarter of the national total). The level of funding for this program has increased dramatically in the past 14 years (Figure), from a low of \$5 million in fiscal year 1976 to the fiscal year 1991 appropriation of \$185 million. The striking increases are largely a reflection of the dramatic increases in vaccine prices and the introduction of new vaccines. As shown by the nonvaccine grant dollars in the Figure, funding for program operations (surveillance of disease and adverse events, coordination, assessment of immunization coverage, evaluation, education, etc) has not increased significantly. Grant funds have not paid for actual administration of vaccine; this typically comes from local or state health department funds, although some funds from the Federal Prevention Services Block Grant, Maternal and Child Health Block Grant, or Medicaid may also be used.

Because of the existence and enforcement of laws re-

Accepted for publication December 27, 1990.

From the Center for Prevention Services, Centers for Disease Control, Atlanta, Ga.

Reprinted from *AJDC* (1991;145:559-562).

Table 1.—Routine Immunization Schedule*

Age, mo	Vaccines
2	DTP, OPV, HbCV
4	DTP, OPV, HbCV
6	DTP, HbCV
15	MMR, HbCV, DTP, OPV
School entry (4-6 y)	DTP, OPV, MMR

*Based on recommendations of the immunization Practices Advisory Committee. DTP indicates diphtheria and tetanus toxoids and pertussis vaccine; OPV, oral polio vaccine; HbCV, *Haemophilus b* conjugate vaccine (the dose at 6 months of age may not be required, depending on which vaccine is used); and MMR, measles, mumps, and rubella vaccine.

quiring immunization before school entry in all 50 states, there is a mechanism for ascertaining with confidence the immunization levels of 5- to 6-year-old children. For the 1989-1990 school year, more than 97% of such children had documentary evidence of having received a full course each of DTP, MMR, and OPV (Table 2), with little variation around the country. Levels nearly as high are reported from Head Start and other licensed day-care centers, where the school immunization requirements also apply. By contrast, there is no single nationwide mechanism for monitoring immunization levels in infants and young children and no mechanism for requiring immunizations. In the past, the US Immunization Survey carried out by the Bureau of the Census³ was used, but it was discontinued in 1985 because of concerns about accuracy and budgetary restrictions. It is estimated that, nationwide, 70% to 80% of children have received a full series of individual immunizations by the time of their second birthday (a convenient measuring point), although the proportion who have received the full course of all immunizations is doubtless lower. However, there is marked variation around the country. In particular, immunization levels among poor inner-city children may be substantially lower. A survey in early 1990 of kindergarten and first-grade public school students in eight inner-city areas (Boston, Mass; Bronx, NY; Cleveland, Ohio; Houston, Tex; Jersey City, NJ; Phoenix, Ariz; Pittsburgh, Pa; and Seattle, Wash) revealed that, although more than 95% had received measles vaccine by the time of school entry, only 51% to 81% (depending on the city) had received the vaccine before their second birthday (median, 68%).⁴ Some had been vaccinated only shortly before entering school to comply with school immunization requirements and thus had been at risk of disease for several years.

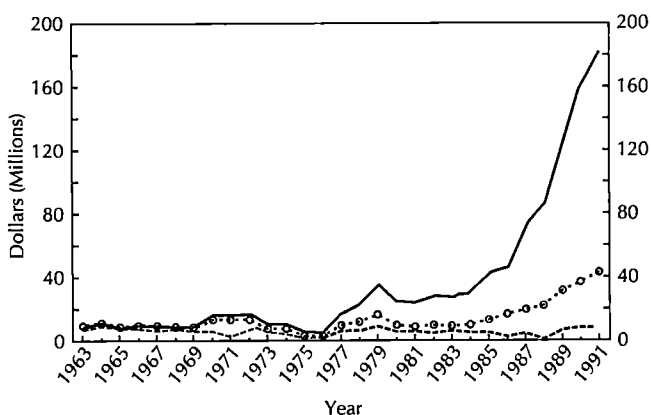
Those who are not immunized on time are likely to be members of racial and ethnic minorities and to be socioeconomically disadvantaged. A recent investigation in Chicago, Ill, demonstrated that only 50% of the students enrolled in predominantly black and Hispanic schools had been immunized against measles by their second birthday, compared with 80% of students in predominantly white schools.⁵ In predominantly black or Hispanic schools 25% to 30% of the students had been vaccinated shortly before school entry, presumably to meet school entry criteria. An inverse correlation was noted between immunization coverage by the age of 2 years and the incidence of measles in preschoolers.

The striking disparity between the extraordinary suc-

Table 2.—Immunization Levels
United States, 1989-1990 School Year

Vaccine	Weighted Average, %			
	Head Start	Day Care	K-1	K-12
DTP	97	95	98	98
Polio	97	95	98	98
Measles	95	95	97	98
Rubella	94	95	97	98
Mumps	97	95	98	98

*Provisional. K-1 and K-12 indicate kindergarten through first and 12th grades; DTP, diphtheria and tetanus toxoids and pertussis vaccine.



Immunization grant dollars, 1963 to 1991, including supplemental funding in 1970, 1974, 1977, 1979, and 1982; grant dollars at current value (solid line), grant dollars adjusted at the 1964 purchasing power base (broken line with circles), and nonvaccine grant dollars adjusted to the 1963 purchasing power base (broken line).

cess in assuring immunization in school-age children and the unacceptable levels seen in inner-city (and in some nonurban area) preschoolers demonstrates two important facts. First, the high immunization levels in schoolchildren indicate that parents want to have (or at least do not mind having) their children immunized. Immunization ranks with motherhood and apple pie as a value for most Americans. Aggressive enforcement of the school immunization requirements, which began in the late 1970s, did not meet widespread opposition. Indeed, in Los Angeles, Calif, and New York, NY, to cite two examples, although thousands of children were denied entry to school (or were sent home) because of a lack of evidence of immunization, most returned to school within 1 or 2 days, either having found their immunization records or having been immunized.

Second, the private and public "system" to deliver immunizations in the United States has the capacity to serve all children (because it ultimately does so) and that the costs of immunization in either the private or the public sector do not pose insurmountable barriers (again, because almost every child ultimately is immunized). This is not to say that the costs of immunization are unimportant; any parent would find the \$59.01 (private sector) vaccine cost of the 15- to 18-month immunization with DTP, OPV, MMR, and *Haemophilus b* conjugate vaccine daunting. In fact, postponing this expenditure may contribute

to the delayed receipt of vaccines. However, in the final analysis, some way is found to meet these costs.

FACTORS RESPONSIBLE

Given a willing populace and a system capable of meeting the need, why is it that we are in such trouble? Here the analysis gets softer with difficulty in documentation and in assigning weights. At least three factors seem to be involved.

Inattention by the Provider

This is a problem both in the private and the public sectors. Even though all births are registered with vital statistics authorities and more than 98% of children in this country are born in hospitals, no uniform data system keeps track of all children and identifies those in need of a dose of vaccine at a particular time. Individual physician offices may have reminder systems, but surveys of private physician records have demonstrated that 10% to 30% (or more) of their patients are not up-to-date for immunizations.⁶ In the public sector, some health departments have automated systems that track individual children, identify those in need of immunizations, and may even generate mailed reminders. A few may employ outreach workers who go into the community and talk with parents about the need for immunization. In the majority of both private and public providers, however, it seems that no comprehensive system exists to identify and notify individuals who need immunization or to assess overall immunization levels in their client populations. Thus, appropriate immunization may depend on a highly motivated parent or a provider who views immunization as a priority.

Another problem arises when the provider does not review immunization status and offer needed immunizations when a child is seen for whatever reason. Each contact with the health care system should include review of immunization status and provision of needed immunizations. Other factors include excessive interpretation of contraindications to vaccination and failure to administer all indicated vaccines at a single visit. A recent review of records at a public health department child health clinic in Los Angeles revealed that only two thirds of the children received MMR vaccine on their first visit after becoming eligible (K. M. Farizo, MD, P. A. Stehr-Green, DrPH, L. E. Markowitz, MD, and P. A. Patriarca, MD, unpublished data, August 1988). None of the "missed opportunities" arose from a valid reason for withholding the vaccine.

Competing Priorities

Simply put, modern parents have many things on their minds. Many children are being raised by single parents who have jobs that do not pay well and that do not provide many benefits. In addition, other children in the home may have other problems. Thus, priorities may focus on more immediate needs, such as food, shelter, clothing, or acute medical care. "Nonurgent" issues, such as immunization of a well child, simply do not reach the threshold for action.

Another indication that immunization may not achieve high priority comes from a consideration of where (and with whom) children are during the day. Sixty percent of children younger than 5 years are in a child-care setting (including 50% of those younger than 2 years, who are most in need of immunization).⁷ Of these, 31% are in a group-care setting (eg, nursery, preschool, or day-care center) where state immunization requirements may ensure immunization. As

noted earlier, immunization levels in these settings are generally high. However, more than two thirds of these children (and more than 85% of those younger than 2 years) are being cared for in another setting, such as a home. Bringing these children to immunization clinics (or bringing immunization services to them) may be difficult.

Barriers to Immunization

Barriers may be as seemingly trivial as the requirement in some health department clinics that immunizations be given only by appointment rather than on a walk-in basis, or they may be more apparent, such as limited clinic hours, no evening or weekend clinics, or insufficient staff. A recent survey of state health department immunization projects revealed that 50% had such barriers.⁸

It is important that parents understand all of the benefits and risks of immunizations, and considerable effort (and legislation) has gone into trying to ensure this.⁹ However, the "Vaccine Information Pamphlets" that are being developed and are required for use with all vaccines may themselves pose a barrier. Despite considerable work, they are written at an eighth-grade reading comprehension level and average 2000 words each. Given that many adults read fewer than 100 words per minute and that there will be three forms to be read at the 15-month visit (DTP, polio, and MMR), it seems likely that the process itself might be a disincentive to parents, not to mention creating an office traffic problem and tying up office staff, whose time may not be adequately reimbursed by third-party payers.

Another potential barrier is less obvious and also results from good intentions: the desire to provide comprehensive care. This may be manifested by a requirement that a child have a complete well-child appraisal before receiving vaccines. Because many health care providers (particularly in the public sector) are overextended, children must wait weeks to months for these appraisals. Meanwhile, they remain susceptible to vaccine-preventable diseases (and, in fact, may be exposed to such diseases when they visit the health care provider). This recalls Voltaire's maxim that "the best is the enemy of the good."¹⁰

Financial barriers may also exist. More than 15% of preschoolers are covered neither by health insurance nor Medicaid and almost 10% have no regular source of care.¹¹ If free public services are not readily available, these children may lose out. In addition, reimbursement mechanisms may cover acute curative care but not preventive services such as immunizations; only 45% of employment-based conventional health insurance plans covered basic childhood immunizations in a recent survey.¹²

POSSIBLE REMEDIES

The easiest recommendation is to say, "Put more resources into immunization programs." Although I agree that more resources will be required, it seems clear that money alone is not the answer.

Some have proposed that the government should provide all recommended childhood vaccines as an entitlement for all children.¹³ As a lifelong advocate of immunization, I find it difficult to argue that this would be inappropriate. However, further reflection suggests that this would not solve the problem. The government (federal, state, or local) provides vaccines for socioeconomically disadvantaged children. Consequently, additional government expenditures for vaccines would essentially

subsidize vaccination for the middle class and well-to-do, who seem to be getting immunized on schedule. Nevertheless, arguments have been made that free services should be provided for all, not just for the poor, so as not to establish a "two-tier" or "second-class" category of care for the disadvantaged. Another reason, given increasing vaccine costs and the increasing number of vaccines, would be to prevent diversion of private-sector patients to the public sector (where vaccines are free), thus preventing further fragmentation of care. In any event, continued government support for all recommended vaccines for socioeconomically disadvantaged children is essential.

More likely remedies flow from the factors mentioned in the preceding section. First, information systems must be developed and put into practice to (1) track the immunization status of each child, (2) prompt a reminder of needed immunizations coming up, and (3) sound an alarm when a child is overdue. Possibly even more important, such information systems would allow health care providers to assess how well they are doing in protecting their clientele. The suboptimal immunization levels found on record reviews are usually a surprise to the provider and commonly result in remedial action.

Second, effective means must be developed to get the word to the child's parents. In many areas, mail or telephone may suffice, but in many poorer areas, parents may be marginally literate, distrust official mail, or have no telephone. Direct contact by an outreach worker seems most likely to be successful in these circumstances, particularly if the outreach worker is of the same racial or ethnic background as the parent. However, additional resources would be required to fund such labor-intensive activities.

Third, some mechanism must be found to raise the priority of immunization. Mechanisms that come to mind are incentives, either positive or negative. A positive incentive might include payment (either monetary or in kind) to the parent when the child is immunized. A negative incentive might be the threat of denial of services or support if the child is not immunized. A large proportion of the children most likely to be behind schedule are enrolled in some type of public-assistance program. In four large, inner-city measles outbreaks recently investigated, it was found that, of the nonimmunized children with measles who were old enough to have been vaccinated, as many as 86% were enrolled in the Aid to Families With Dependent Children program and up to 61% were enrolled in the Special Supplemental Food Program for Women, Infants, and Children.¹⁴ Perhaps it would be possible to require age-appropriate immunization as a condition for continued participation (not initial enrollment) in these programs. Although there is justifiable concern that this might result in needy children being denied services, it seems likely that the experience encountered when first enforcing school immunization requirements would be repeated, and no, or only temporary, withdrawal of benefits would occur. Additionally, such a process would also ensure that children were gotten into the health care system where they could receive other important services.

Increased efforts to promote or "market" immunizations are needed to raise the priority of immunizations.

Efforts to reduce barriers are also needed. Administrative procedures must be reviewed to ensure that they do not impede immunization. In addition, clinic services

need to be increased, in terms of their overall capacity, their location, and the times at which they are offered. This strengthening of the public health "infrastructure" has historically been primarily a local and state activity, with federal involvement playing a minor role. A recent Institute of Medicine study has described the public health system in this country as being "in disarray," not just in terms of immunizations but with regard to the entire public health mandate. A societal commitment is necessary to ensure that the public sector is capable of providing needed services, and this will require increased public-sector resources from all levels.

More education is needed for health care providers to ensure that they realize the importance of immunizations, understand true and false contraindications, and eliminate missed opportunities for immunizations. Professional societies can play a leading role in this aspect.

It is not at all clear how we can reconcile the need to ensure informed participation with the fact of extensive, and often conflicting, information about the benefits and risks of particular vaccines. It is clear, however, that the days have gone of the "MDeity" deciding unilaterally what is best for the patient.

Reducing the barriers relating to the desire for comprehensive care may be difficult but should not be impossible. Even while scheduling children for future comprehensive evaluations, it should be possible to establish "express lane" immunization services to immunize all children who come to a health care provider. Leadership from professional societies will be essential to bring about this change in orientation. Immunizations should also be brought to children in child-care settings and in programs such as the Women, Infants, and Children program and Aid to Families With Dependent Children. Given the overburdened facilities of the Women, Infants, and Children program and Aid to Families With Dependent Children, the provision of immunization on site will require increased resources.

COMMENT

Although we have much to be proud of in the way we are protecting our children with immunizations, significant problems remain. No single "magic bullet" is apparent that would remove all the problems. A multifaceted approach is needed to reduce the problems already identified, and research is needed to define the factors involved in immunization and nonimmunization and to develop more effective interventions. Immunizations are among the most precious health gifts we can give our children; we must find the ways to ensure full and equitable distribution of these gifts.

References

1. Centers for Disease Control. General recommendations on immunization. *MMWR*. 1989;38:205-214, 219-227.
2. American Academy of Pediatrics, Committee on Infectious Diseases. Measles. *Pediatrics*. 1989;84:1110-1113.
3. Orenstein WA, Bernier RH. Surveillance. *Pediatr Clin North Am*. 1990;37:709-734.
4. Centers for Disease Control. Measles vaccination levels among preschool-aged children in 8 selected cities, United States. *MMWR*. 1991;40:36-39.
5. Centers for Disease Control. Update: measles outbreak—Chicago, 1989. *MMWR*. 1990;39:317-319, 325-326.
6. Ector WL. Immunization levels of children in private practice. In: Proceedings of the 15th Immunization Conference of the Centers for Disease Control; March 10-13, 1980; Denver, Colo; pp 70-72.

7. Dawson DA, Cain VS. Child care arrangements: health of our nation's children, United States, 1988. Advance data No. 187. Hyattsville, Md; National Center for Health Statistics; 1990. 1990;
8. Orenstein WA, Atkinson W, Mason D, Bernier RH. Barriers to vaccination of preschool children. *J Health Care Poor Underserved*. 1990;1:315-329.
9. Bruce R. Status and use of vaccine information pamphlets. In: Proceedings of the 24th National Immunization Conference of the Centers for Disease Control; May 21-25, 1990; Orlando, Fla; pp 99-100.
10. Arouet FM (Voltaire). *Dictionnaire Philosophique*. 1764.
11. Bloom B. Health insurance and medical care: health of our nation's children, United States, 1988. Advance data No. 188. Hyattsville, Md: National Center for Health Statistics; 1990.
12. *Health Insurance Association of America Survey 1989*. Washington, DC: Health Insurance Association of America; 1989.
13. American Academy of Pediatrics. Cross-national comparisons of child health. *Pediatrics*. In press.
14. Hutchins SS. Access of preschool-aged children to health care services and federal assistance programs. In: Proceedings of the 24th National Immunization Conference of the Centers for Disease Control; May 21-25, 1990; Orlando, Fla; pp 87-92.

The Challenge of Caring for Indigent Children With Rheumatologic Diseases

Michael L. Miller, MD, Patience H. White, MD

● **Poverty and lack of insurance prevent complete access to tertiary care for many children with rheumatologic diseases. Long-term solutions to provide community based support for local teams and other services are needed. Physicians need to work with colleagues in health care systems and government to make the health care system fully available to all families. Medical schools can act as catalysts in helping government agencies redefine policies to support outreach and other health care programs for the indigent. Governmental agencies must collaborate with insurance companies to change policies so as to cover all aspects of service, including those provided by arthritis health professionals. With coordinated effort, the goal of adequate services to indigent children with rheumatologic and other chronic illnesses can become reality.**

Poverty amplifies problems that rheumatologic diseases impose on children and their families. Providing adequate care becomes a challenge for society no less than for physicians and other health care professionals. For the many indigent children with these diseases who do not receive continuing primary care, access to pediatric rheumatology centers becomes difficult. Those who do get to pediatric rheumatology centers often have difficulty in getting prescribed services, such as physical therapy. As a result, potentially reversible problems, such as joint contractures, may last well into adulthood; persisting disability can interfere with the ability to work. This article will examine problems with access to and delivery of care for impoverished children with rheumatologic diseases. We will suggest some approaches health care professionals can take in dealing with these problems.

PROBLEMS IN ACCESSING CARE

Poverty and lack of insurance prevent access to tertiary care for many children with rheumatologic and musculoskeletal diseases. Among youths aged 19 to 24 years, these illnesses account for more than half of chronic disabilities in this country; 20% of affected children are un-

insured.¹ For the uninsured, the Medicaid program has yet to live up to its promise. Although it increased access to ambulatory services for children of lower socioeconomic status, Medicaid has covered less than half of children from low-income groups during the past decade.² This may explain why indigent children with health problems do not visit physicians as often as those from higher socioeconomic groups.^{3,4} Because their parents cannot afford it, many indigent children with chronic diseases do not receive continuing primary care.⁵ Thus, impoverished children with arthritis often cannot get longitudinal monitoring of their illness. The result can be delayed diagnosis and later referral to pediatric rheumatology centers, which can affect prognosis.

Even when Medicaid or insurance companies cover rheumatologic illnesses, many children cannot get the coordinated services they need for optimal care. Federal and state governmental agencies do not pay for all the necessary care. Those indigent families with some form of health insurance are usually underinsured because their employers offer benefits programs that do not provide full coverage. As health care costs increase, coverage becomes even more restricted. Reimbursement for physical and occupational therapy, nutritional counseling, and orthotic devices is either insufficient or, in some cases, nonexistent. Families with marginal incomes often cannot afford to pay for uncovered services.⁵

Decreased access to care for indigent children with chronic rheumatologic diseases causes serious consequences. Families experience fragmentation of services: they may need to choose between paying for primary preventative care locally or for transportation to and care at tertiary care centers. Decreased services can lead to uncorrected disability that worsens over time. Community-based services could provide some of these services if they were more complete. Respite programs offering parents help with affected children and their siblings are only partially funded.

Impoverished children with arthritis face additional problems when they enter the adult world. Young adults may lose funding for medical care because of age limits set by state agencies. Those on the lower end of the socioeconomic scale tend to have lower educational achievements. In adults with rheumatoid arthritis, low educational levels correlate with worse prognosis⁶; the resulting disabilities make getting work more difficult. Available jobs often do not offer adequate health insurance, perpet-

Accepted for publication December 27, 1990.

From the Department of Pediatrics, University of Texas Health Science Center, San Antonio (Dr Miller); and the Department of Pediatrics, Children's National Medical Center, George Washington University, Washington, DC (Dr White).

Reprinted from *AJDC* (1991;45:554-558).

uating the cycle of decreased access to health care. Thus, indigent young adults who are poorly educated may have the most severe disease and the last access to health care.

SERVICES THAT ARE NEEDED FOR OPTIMAL CARE

For children who regularly visit pediatric rheumatology centers, prognosis depends on the nature of their illness and the availability of medical services. The three most common rheumatologic illnesses of childhood are juvenile rheumatoid arthritis (JRA), systemic lupus erythematosus, and dermatomyositis.⁷ Juvenile rheumatoid arthritis is not rare; in the United States, it is estimated to affect more than 10 children per 100 000.⁸ Juvenile rheumatoid arthritis is classified into systemic, pauciarticular, and polyarticular types, based on clinical presentation, including number of joints affected, and course. Patients with JRA need close monitoring of their anti-inflammatory medications. They also need close follow-up by ophthalmologists, physical and occupational therapists, and other health care professionals. Lupus, an autoimmune disease of unknown etiology, can present at any age, but most pediatric cases occur in adolescent girls. Services needed depend on complications, which include chronic renal disease, pleuritis, pericarditis, and arthritis.

Patients with systemic lupus erythematosus often require chemotherapeutic agents, necessitating regular hospitalization and outpatient follow-up. Dermatomyositis, an inflammatory disease of skin and muscle, requires intensive physical therapy and anti-inflammatory or immunosuppressive medication. Most pediatric rheumatologic patients survive into adulthood. Because their illnesses often remain active, they need complex transition services. These include identifying primary care physicians familiar with their type of illness, training in job readiness skills, and sex counseling (as many are at risk for teenage pregnancy).

No matter what their socioeconomic status, children with rheumatologic illnesses and their families need help in using disparate resources scattered throughout the community. This is often best done in a planning process called "case management" by pediatric rheumatology teams. The coordinating team often includes parent representatives, physicians, nurses, social workers, and physical and occupational therapists. Team members also use their individual skills to provide coordinated care in a single setting. For instance, children and their families need to comprehend clearly the nature of their illness. Nurses help families to understand further the information communicated by other health care professionals. Families can then select from the many materials (including videotapes, pamphlets, and coloring books) now available on JRA and other rheumatologic diseases. Nurses are often the first to help families decide whether a visit to the primary physician or subspecialist is needed. In this sense, pediatric rheumatology nurses perform triage as important as that provided in emergency departments for patients with acute problems.

Indigent families need help in using resources effectively. They often do not know where to find local community services; they may not understand the bureaucratic processes required to maintain eligibility for aid. Social workers on pediatric rheumatology teams help fam-

ilies in a variety of ways, such as helping them get emergency funds to purchase food or obtain, complete, and follow up on application forms for state and federal aid. Since parents of children with chronic illnesses are more likely to divorce, social workers provide counseling for families in distress. Social workers identify and arrange intervention for children at risk for medical or physical neglect. These important services are seldom reimbursed. Yet social workers obtain clinical revenues from state and federal sources for medical care that would otherwise be unavailable.

Many children with JRA and other rheumatologic illnesses need to improve their independence by increasing joint mobility and muscle strength, obtaining adaptive aids for daily living, and learning coping skills to minimize pain. Physical therapists can help by recommending exercise programs for home and school. When joint flexion contractures develop in patients with JRA, occupational therapists can make some of the necessary splints. They also work with patients to improve activities of daily living. Occupational therapists work with school personnel to adjust schedules, giving appropriate periods for rest or for walking between classes. They monitor other changes in the school environment that will improve the student's ability to function.

Some patients with JRA have growth abnormalities,⁹⁻¹¹ become anorectic,¹² or are at risk for becoming malnourished.¹³ These problems are exacerbated by the difficulty many poor families have in affording sufficient food to feed their children.^{14,15} Dieticians on pediatric rheumatology teams document food intake and identify for the social worker which families need aid for nutritional supplements. They counsel families on how to prepare a balanced diet on a limited income.

Career maturity is often delayed in adolescents with rheumatologic diseases, compared with their nondisabled peers. It is most severe in those teenagers whose disease onset was in early adolescence.¹⁶ In most of the United States, current services are inadequate to handle this group of chronically ill and disabled adolescents. For example, a recent Harris poll found that between 50% and 75% of young adults with disabilities are jobless; 67% of those who were unemployed wanted to work.¹⁷ However, the Federal Vocational Rehabilitation System only provides services to young adults over 18 years old in many states. Earlier delivery of vocational programs might help children with rheumatologic diseases make a better transition from school to work. The widespread absence of this type of program typifies some of the problems that exist in delivering services.

PROBLEMS IN DELIVERING SERVICES

Delivering services to indigent children with rheumatologic diseases is difficult. Parents may be unable to take children for physical or occupational therapy if they lack funds for transportation. Delays in insurance reimbursement sometimes prevent families ineligible for assistance from buying medications. Inadequate funding for services makes it difficult for some medical centers to recruit and keep arthritis health care professionals.

School districts in poverty-stricken areas do not always provide special education services mandated by the federal Public Law No. 94-142 (Education for All Handicapped Act, 20 USC, §1401 (1). (15)) for children with

"other health impairments," including JRA.¹⁸ Low budgets may prevent administrators from providing school facilities that have adequate access for the physically handicapped. To be able to sit in the classroom and write their assignments, some students with severe arthritis need range of motion and stretching exercises in school. However, many poor school districts cannot offer competitive salaries or fees to recruit physical therapists, even when state funds are available for therapy sessions. Children with arthritis in these districts may suffer increasing pain, weakness, or joint contractures. As a result, they miss more days of school; when in school, they have difficulty in concentrating.^{19,20}

In many states throughout the country, agencies that administer the Chronically Ill and Disabled Children's Services programs encounter fiscal constraints in caring for indigent children. To meet budgets passed by cost-conscious state legislatures, these agencies sometimes must set limits on reimbursement that interfere with care for chronic illness. Limits to the number of hospital days reimbursable for rehabilitation deny some impoverished children with severe arthritis and dermatomyositis the intensive inpatient physical and occupational therapy needed for optimal recovery. Agencies in some states must also restrict the coverable diagnoses or complications to meet budgets; for instance, only musculoskeletal complications of systemic lupus erythematosus may be covered. States do not always cover costs for necessary services provided by team members. Social work services, for example, are rarely covered. Nutritional counseling for poor children may not be available in states that do not offer reimbursement. Another example of limited service for children with arthritis concerns splinting, often necessary to restore function to contracted joints. When budget crises affect state medical programs, state agencies are forced to delay reimbursements to vendors, who in turn may not honor orthotic prescriptions. Ironically, the result may be a nonbiologic seasonal variation in the duration of joint contractures, in which increases occur at the end of the state's fiscal year.

State funding problems have also affected some outreach programs, in which pediatric rheumatologists visit outlying areas. They work with locally based health care teams, which may also care for children with other chronic illnesses. The federal or private grants that start these programs are usually temporary; when support ends, local funding may not always be sufficient to maintain all the local team members. Long-term solutions to provide community-based support for local teams and other services are needed.

POSSIBLE APPROACHES

Physicians and other health care professionals have been making progress on the problems described above. Much work remains to be done by people at all levels of the health care system. Parents, community organizations, primary care physicians, pediatric rheumatologists and their teams, and medical schools all have their role to play. With coordinated effort, the goal of adequate services to indigent children with rheumatologic and other chronic illnesses can become reality.

Parents are their children's best advocates when they understand some fundamental issues about health care. Specifically, impoverished children with rheumatologic

diseases will only receive services for which society is willing to pay. Enhancing those existing services that are sub-optimal will require advocacy. Therefore, parents must form new coalitions with health care professionals, community agencies, and foundations in being strong advocates for government-supported services for all indigent children with chronic illnesses.

The American Juvenile Arthritis Organization (AJAO), part of the Arthritis Foundation, provides parents a forum for advocacy, education, and support. Both parents and professionals belong to and help operate AJAO. A quarterly newsletter provides information on care and research of JRA and related illnesses. Local chapters conduct camps and other activities. An excellent compendium of information about JRA is available through the Arthritis Foundation.²¹

The Arthritis Foundation is interested in new ways in which parents can get better care for their children with rheumatologic diseases. For instance, the AJAO will be starting a new program to involve parents in regionalization of services. Regionalization is described by Perrin and Ireys⁵ as the establishment of regionwide standards of referral, evaluation, and care of children with chronic illnesses. The authors discuss the utility of a database that identifies medical and nonmedical resources, and they recommend a plan for regional care that includes referral mechanisms and community education.

To establish its program fostering regionalization, the Arthritis Foundation collaborated with Daniel Lovell, MD, MPH, University of Cincinnati, Ohio, in obtaining federal support from the Maternal and Child Health Bureau of the US Department of Health and Human Services. The Arthritis Foundation is establishing the National Resource Center for Childhood Rheumatic Diseases (NRCCRD). The NRCCRD will train parents to participate in support groups, become advocates for improved services, and give feedback concerning programs to health care professionals. Local Arthritis Foundation chapters will train parent-professional teams, which will in turn train parents in pediatric rheumatology centers. Indigent families can receive training directly from these teams. The NRCCRD may serve as a model for involving indigent parents of children with many other chronic illnesses in the regionalization of health care delivery.

Community organizations need to petition state legislatures and the federal government to fund services at adequate levels for children with rheumatologic and other chronic diseases. Many organizations are currently advocating improvements in health care coverage for children with chronic illnesses, including rheumatic disease. The American Academy of Pediatrics (AAP) has proposed a comprehensive health insurance plan.²² The AAP is also collaborating with the Maternal and Child Health Bureau in developing strategies for improving community-based access to care.

Health services research has documented the need for services; communities can help investigators get funding for further research through fund-raising and legislative advocacy. Some local health departments have been successful in convincing public health degree candidates to conduct research on delivery of health care as part of their training. Local organizations can also learn more about these issues and meet some service needs by offering to

place volunteers in outreach clinics for children with rheumatologic and other chronic illnesses.

Pediatricians and other primary care physicians provide critical help for indigent children with chronic rheumatologic illnesses by following up these children along with subspecialty health care teams. In clinics serving indigent areas, primary care physicians are the first to identify problems worsened by poverty. Close communication between primary care physicians and pediatric rheumatology teams allows the teams to identify which children need help with noncompliance and school problems. Primary care physicians also work closely with pediatric rheumatology teams in coordinating provision of local services for families, thus helping to reduce fragmentation.

If primary care physicians and other health care professionals need more information about pediatric rheumatologic illnesses, information is available through local continuing medical education and AAP education programs. The Arthritis Foundation and the American College of Rheumatology also provide educational materials. In addition, programs are available where health care professionals can rotate through pediatric rheumatology services. Informed health care professionals can work more closely with community groups, local schools, and subspecialty health care teams. Using limited resources, they can make the best choices possible in upgrading local health care delivery.

Members of pediatric rheumatology teams help provide comprehensive service to indigent children with rheumatologic illnesses, as mentioned above. In the future, the increased use of questionnaires will help pediatric rheumatology team members evaluate and monitor the progress of children with JRA and related diseases. A school questionnaire assesses the physical problems confronting children in school and suggests solutions to these problems.¹⁸ The Family Environment Scale measures the ability of families to cope with emotional issues.²³ Myones et al²⁴ have used it to study families of patients with JRA. Dieticians use 24-hour recall questionnaires and diet diaries. Monitoring the functional disability caused by JRA can help pediatric rheumatology teams identify patients in need of rapid services. Lovell et al²⁵ recently developed and validated a pediatric version of the Health Assessment Questionnaire used in adults with arthritis.²⁶ Indigent children will benefit greatly; the Lovell et al instrument can monitor the ability of intervention to improve function in situations where many complex underlying factors may contribute to impairment.

Outreach programs are an important indicator of how carefully different professionals must work together. As mentioned, government or foundation sources of initial funds will not always provide continuing support. The survival of outreach programs therefore requires that local medical and nonmedical organizations arrange for continuing financial support through foundations, fundraising, and advocacy through state legislatures. During the planning stages for new outreach programs, local organizations, state agencies, and medical schools need to discuss how they can best make the transition from temporary to permanent sources of funding without interrupting services.

Medical schools can act as catalysts in helping government agencies redefine policies to support outreach and

other health care programs for the indigent. For example, the University of Texas, San Antonio, has begun a program for working with state health agencies in delivering care to the poor of all ages in the Rio Grande Valley. In this program, called the University of Texas System Valley/Border Health Services Task Force, university health care professionals and administrators meet with local and state counterparts in designing delivery systems that conserve fiscal and professional resources. The collaboration between university, state government, and local health departments is critical in linking primary and specialty health care in south Texas.

Children's hospitals can establish programs for adolescents with chronic illnesses that help them prepare for employment. At the Children's National Medical Center in Washington, DC, the Adolescent Employment Readiness Center offers career and academic counseling to individual teenagers. A newsletter informs adolescents and their families about career awareness and other workshops. The center also holds seminars for schools, community groups, and employers.

Economic conditions in the immediate future may require a decrease in budgets for the care of children with rheumatologic diseases. The approaches mentioned will be feasible only if financial planning is at the core of planning coordinated programs. For instance, some children's hospitals cannot afford dedicated pediatric rheumatology teams. They may be able to establish teams caring for children with related problems, such as musculoskeletal teams for children with rheumatologic and orthopedic problems. Health care teams can use computer programs to produce more efficient schedules by tracking time required to deliver services. Administrators may be able to help teams set up fiscal models. Such models could determine the most cost-effective use of community resources by families as well as by the teams.

Eliminating rheumatologic diseases through cures generated by basic research is the ultimate solution to problems worsened by poverty. Research establishing a vaccine resulted in eliminating polio as a major health problem. Similarly, etiologies and better treatment will probably be determined by studies of transgenic mice. However, the best therapy is only as good as the ability to make it uniformly available. Governmental agencies must collaborate with insurance companies to change policies so as to cover all aspects of service, including those provided by arthritis health care professionals. Physicians need to work with colleagues in health care systems, government, and the Arthritis Foundation to make the health care system fully available to all families. Educating the public about chronic illnesses in childhood will be necessary to reach this goal. Only then will children with rheumatic diseases, irrespective of their socioeconomic status, get the primary and coordinated subspecialty care they deserve.

We greatly appreciate comments on the manuscript provided by John A. Mangos, MD, and Victor German, MD, PhD.

References

1. McManus MA, Newacheck PW, Greaney AM. Young adults with special health care needs: prevalence, severity, and access to health services. *Pediatrics*. 1990;86:674-682.
2. Newacheck PW, Halfon N. Access to ambulatory care services for economically disadvantaged children. *Pediatrics*. 1986;78:813-819.

3. Kleinman JC, Gold M, Makuc D. Use of ambulatory medical care by the poor: another look at equity. *Med Care*. 1981;19:1011-1029.
4. Newacheck PW, Starfield B. Morbidity and use of ambulatory care services among poor and nonpoor children. *Am J Public Health*. 1988;78:927-933.
5. Perrin JM, Ireys HT. The organization of services for chronically ill children and their families. *Pediatr Clin North Am*. 1984;31:235-257.
6. Callahan LF, Pincus T. Formal education level as a significant marker of clinical status in rheumatoid arthritis. *Arthritis Rheum*. 1988;31:1346-1357.
7. Cassidy JT, ed. *Textbook of Pediatric Rheumatology*. New York, NY: John Wiley & Sons Inc; 1982.
8. Towner SR, Michet CJ Jr, O'Fallon WM, Nelson AM. The epidemiology of juvenile arthritis in Rochester, Minnesota. *Arthritis Rheum*. 1983;26:1208-1213.
9. Lovell DJ, White PH. Growth and nutrition in juvenile rheumatoid arthritis. In: Woo P, ed. *Pediatric Rheumatology Update*. New York, NY: Oxford University Press Inc; 1990:47-56.
10. White PH. Growth abnormalities in children with juvenile arthritis. *Clin Orthop*. 1990;259:46-50.
11. Bacon MC, White PH, Raiten DJ, et al. Nutritional status and growth in juvenile rheumatoid arthritis. *Semin Arthritis Rheum*. 1990;20:97-106.
12. Miller ML, Chacko JA, Young EA. Dietary deficiencies in children with juvenile rheumatoid arthritis. *Arthritis Care Res*. 1989;2:22-24.
13. Henderson CJ, Lovell DJ. Assessment of protein-energy malnutrition in children and adolescents with juvenile rheumatoid arthritis. *Arthritis Care Res*. 1989;2:108-113.
14. Karp RJ. Undernutrition and the cycle of poverty. *Pediatr Ann*. 1990;19:268-271, 274-275.
15. Karp RJ. The social context of malnutrition in childhood. *Bull N Y Acad Med*. 1989;65:1026-1031.
16. White PH, Gussak D, Hixson D. Career maturity of adolescents with juvenile rheumatoid arthritis (JRA) compared to other chronically ill adolescents. *Arthritis Rheum*. 1989;32S:29.
17. Rosch D, Phelps A. Secondary special education and transition from school to work: a national priority. *Except Child*. 1987;53:487-491.
18. Spencer CH, Zanga J, Passo M, Walker D. The child with arthritis in the school setting. *Pediatr Clin North Am*. 1986;33:1251-1264.
19. Stoff E, Bacon MC, White PH. The effects of fatigue, distractibility, and absenteeism on school achievement in children with rheumatologic diseases. *Arthritis Care Res*. 1989;2:49-53.
20. Lovell D, Arthreya B, Emery H, et al. School attendance patterns, special services, and special needs in pediatric patients with rheumatoid diseases: results of a multicenter study. *Arthritis Care Res*. In press.
21. Kovalsky A, Boutaugh M, Erlandson D, et al. *Juvenile Rheumatoid Arthritis: A Health Professional's Guide to Teaching Children and Patients*. Atlanta, Ga: Arthritis Foundation; 1987.
22. Harvey B. A proposal to provide health insurance to all children and all pregnant women. *N Engl J Med*. 1990;323:1216-1220.
23. Moos RH, Moos BS. *Family Environment Scale Manual*. Palo Alto, Calif: Consulting Psychologists Press; 1981.
24. Myones BL, Williams GF, Billings A, Miller III JJ. Social environment in families of children with juvenile arthritis. *Arthritis Care Res*. 1988;1:17-22.
25. Lovell DJ, Howe S, Shear E, et al. Development of a disability measurement tool for juvenile rheumatoid arthritis: the Juvenile Arthritis Functional Assessment Scale. *Arthritis Rheum*. 1989;32:1390-1395.
26. Fries JF, Spitz P, Kraines RG, Holman HR. Measurement of patient outcome in arthritis. *Arthritis Rheum*. 1980;23:137-145.

Poverty and Cardiac Disease in Children

Hugh D. Allen, MD; Kathryn A. Taubert, PhD; Richard J. Deckelbaum, MD; David Driscoll, MD; Ann Dunnigan, MD; Samuel S. Gidding, MD; Paul Herndon, MD; Rae-Ellen W. Kavey, MD; Charles Mullins, MD; A. Rebecca Snider, MD; William B. Strong, MD; Reginald Washington, MD

Almost 80 million children live in the United States. At least eight of every 1000 infants born each year have congenital heart defects.¹ When mortality and spontaneous defect improvement are factored into live birth data, Roberts and Cretin² estimated that by 1995 there will be 300 000 children under the age of 21 years with congenital heart disease; 38% will have had one or more surgical procedures. Other children will develop acquired heart disease, such as cardiomyopathies, rheumatic fever, acquired immunodeficiency syndrome with its myocarditis, Kawasaki disease, and arrhythmias. The projected incidence estimate for supraventricular tachycardia alone is between one and four per 1000.³ Familial hypercholesterolemia will affect the future of an unknown but probably large number of children. Therefore, at least one-half million children in the United States have some form of cardiac problem.

One quarter to one third^{4,5} of the more than 4 million infants born each year⁶ are born into poverty. Therefore, approximately 150 000 to 200 000 children have the problems of both being poor and having heart disease. Considering the birth rate and incidence of heart disease, 8000 to 10 000 infants with heart problems will be added to this population each year. The impact of illegal immigrants on the overall population figure is unknown. Additionally, the assignment of the term *poverty* for a family of four at \$12 675 is probably unrealistic; according to the National Center for Health Statistics, many families will still live in poverty even at a breakpoint of \$20 000.⁷ Some families with incomes greater than \$20 000 live in a notch group between poverty and affordability. These groups will further inflate the numbers of poor children with heart problems.

Nearly every child who has been diagnosed as having a heart problem will require some follow-up care. In the Baltimore-Washington Infant Study, for example, among all patients with heart disease diagnosed during the 1st year of life, more than 80% required ongoing pediatric cardiology visits. Furthermore, about 50% required invasive diagnostic procedures and approximately 40% needed cardiac surgery (C. Ferencz, MD, MPH, Principal Investigator, Baltimore-Washington Infant Study, unpublished data, 1981-1987). Regardless of ability to pay, affected chil-

dren require access to the pediatric cardiac health care system.

UNIQUENESS OF THE POVERTY POPULATION

Pregnant women who live in poverty have less prenatal care than affluent patients. This creates a problem for certain fetal conditions that must be detected in enough time to institute treatment that will allow fetal salvage. For example, fetal echocardiography permits the diagnosis of supraventricular tachycardia in hydropic fetuses. These can be successfully treated by administration of antiarrhythmic drugs to the mother. Otherwise the fetus could die. Detection and careful control of the diabetic mother results in less frequent occurrence of diabetic cardiomyopathy in the newborn. Maternal drug abuse and acquired immunodeficiency syndrome are both associated with poverty and with newborn cardiac disorders.⁸⁻¹⁰

The poor have greater exposure to certain environmental risk factors, such as lead, solvents, traffic and factory emissions, and pesticides.^{11,12} They can be exposed to these atmospheric teratogens both at home and in the workplace.

The poor have a higher illiteracy rate, often have large families, and often experience difficulty accessing (or paying for) transportation to cardiac care for their children. This is especially the situation for the rural poor. The quality of the system accessed can be variable. All these factors contribute to fewer postnatal visits where early detection of cardiovascular disorders can make a significant difference in the survival rate of children who have potentially treatable lesions that are lethal if not detected and treated.

Subsequent problems of infants and older children with heart disease include availability of and receiving immunizations, proper nutrition, and ability to comply with ongoing treatment plans, including filling prescriptions. If the child with a significant cardiac defect becomes infected with, for example, pertussis, that superimposed disease could prove fatal in the already compromised patient. Children with cyanotic heart disease, those with congestive heart failure, and those being prepared for operation or who have had an operation require proper nutrition to maintain growth and to keep up with increased energy intake demands imposed by their condition. The child may receive an initial prescription provided by a cardiologist; however, access to a pharmacy or ability to afford the sometimes very expensive drugs necessary to control the child's condition may prevent the parent from providing that medication on an ongoing basis. Compliance with administration of the medication is sometimes compromised by problems as simple as the parent's inability to read and understand the directions printed on the label.

Accepted for publication November 19, 1990.

From the Committee on Congenital Cardiac Defects, the Committee on Atherosclerosis and Hypertension in Childhood, and the Committee on Rheumatic Fever, Endocarditis, and Kawasaki Disease of the Council on Cardiovascular Disease in the Young of the American Heart Association, Dallas, Tex.

Reprinted from *AJDC* (1991;145:550-553).

Older children in the poverty level have more risk factors for cardiovascular disease as adults than do the affluent. These include at least hypertension, smoking, and diet. With their known increased exposure to drug abuse, they have a greater risk of endocarditis, of acquired immunodeficiency syndrome with its myocarditis, and of their own offspring having congenital heart disease, such as that encountered with exposure to cocaine and alcohol. Rheumatic fever has always been primarily considered a disease of the poor, and studies from the 1970s and 1980s continue to show this pattern.¹³⁻¹⁵ Recent data show that rheumatic fever attacks are still being reported in all areas of the country.¹⁶ Other published focal experiences have shown that numbers of cases of acute rheumatic fever are increasing at least in these areas, which may or may not portend a national phenomenon.¹⁷⁻²¹ Compliance with ongoing prophylactic measures for prevention of secondary attacks of rheumatic fever is compromised by poverty, access to medication, and understanding of the disease process.

COVERAGE PATTERNS

Crippled Children's Services or Medicaid coverage is available to many poor children with heart disease. For those who can afford it, insurance is available but may not be granted to those with preexisting conditions. With rising costs of health insurance, insurance may not be affordable to those just above the poverty level no matter whether the condition is covered or not. Certain groups have unique problems. These include the young adult over 21 years of age who previously had Crippled Children's Services coverage but no longer qualifies because of age. Another is the young adult who leaves college and/or reaches the age of 23 years and is no longer eligible for parental private health insurance coverage. If these patients are faced with the need for a major intervention, such as cardiac surgery, their lack of coverage, no matter what profession they have entered, may move them into poverty. This group was much smaller in the past because many of these children did not survive into adulthood. However, surgical and medical advances have improved the survival and quality of life for these young adult cardiac patients, and many more will enter adulthood during the next decades.

A notch group of those parents who do not qualify for public assistance yet cannot afford private insurance can be similarly devastated by an expensive interventional procedure that is considered necessary for treating their child's cardiac condition. This sometimes presents the dilemma of either entering poverty or not treating the heart problem.

Only 53% of the children below the poverty line are covered by Medicaid for reasons of either not qualifying, not applying, or not understanding the application.²² Most states limit children's Medicaid eligibility level, some to a level as low as 14% of the poverty line.²³ Particularly affecting the cardiac patient is that several states limit the number of hospital days covered and/or the number of physician visits allowed.²⁴

Since the introduction of the "War on Poverty" 25 years ago and the birth of Medicare/Medicaid, a dramatic but not yet adequate reduction in the percentage of the elderly classified as "poor" (28.5% in 1966 to 12.4% in 1986) has been achieved.²⁵ During the same time span, children

have formed the majority of the poverty population (the so-called new poor) and also represent the segment with the least insurance coverage.^{23,25} Over 4 million children uninsured and living in poverty are not eligible for Medicaid.²⁶ The popular press has also recently discussed this problem. *Time* magazine reported that between 1978 and 1987, spending on programs for the elderly rose 52% while spending on children dropped 4% (October 8, 1990:41-48). It is apparent, therefore, that children have much less vocal representation and impact at the voting booth.

Children of the homeless, the migrant worker, and the illegal immigrant may have greater problems than those who have permanent shelter. These include less coverage because of their transience, variations in state Medicaid coverage, language difficulties, problems understanding the application process, and fear of discovery of their immigrant status.⁴

UTILIZATION OF THE SYSTEM

Some pediatric cardiology systems are not user friendly and can be confusing and intimidating, especially for poor patients. Difficulties can include transportation to the facility, parking or finding the right bus line, finding someone to stay with the other children at home, and coping with an inpatient environment where the child's illness already imposes confusion and anxiety. Many of these parents cannot afford food or housing for themselves during their child's inpatient stay. Furthermore, they may have no resources for the care of the children who remain at home.

Outpatient costs may be affordable for such situations as a physician visit but not for expensive testing, such as Doppler echocardiography or magnetic resonance imaging. All of these factors tend to discourage the parents from keeping return appointments, refilling prescriptions, or dealing with their child's ongoing cardiac health care needs.

There are up to 3 million homeless people in the United States. Depending on the geographic location, one third to three quarters are children.^{27,28} Characteristics of this population include less use of the health care system, as eating is a higher priority; episodic usage of acute facilities when problems arise; and less follow-up care because of their mobility and difficulty in accessing a consistent system. Similarly, children of migrant workers, whether having immigrated illegally or not, do not have access to ongoing health care. Such parents do not always have a clear understanding of their child's cardiac condition, do not remember the name of their last provider, and move from community to community without carrying adequate documentation of their child's condition. This, in addition to lack of continuity of care in one location, complicates the situation for their child with a cardiac condition. Additionally, cultural differences, language difficulty, and fear of being detected as an illegal immigrant often delay or inhibit proper cardiac health care to this group. Certain hospitals, because of economic pressures, deny admission or care to these children unless an absolute and dire emergency is detected. They then force early discharge after the child's condition has been stabilized, but not necessarily when maximum benefit has been achieved.

Guidelines and handout materials are often written for those who have attained a fairly high educational level. For

example, nutritional advice is sometimes aimed at the affluent but does not take into account foodstuffs available to the poor, who must be careful of every dollar spent at the supermarket.

Atherosclerotic risk factor prevention is likewise directed toward the affluent. Such physical activities as swimming or tennis almost categorically exclude the poor, who do not have access to such sports facilities. Tobacco advertising is characteristically directed at the poor. Risk factor education and implementation may be available only through the schools, but many inner-city or rural schools cannot afford to provide nutritional programs, hypertension screening, or physical education programs aimed toward improved fitness.

RESPONSE OF THE PRESENT SYSTEM

Pediatric cardiologists currently respond to these problems by availability, especially for emergencies on a 24-hour basis, writing off bills, and providing free care both in outpatient clinics and as inpatient teaching attending physicians. Some offer flexible office hours and scheduling to meet the time constraints of working families. Many provide free or less expensive care at outlying clinics throughout their state, which are usually sponsored by Crippled Children's Services or the Bureau of Maternal and Child Health. These take the physician to the patient and often offer care that would otherwise be unavailable. Many pediatric cardiologists also provide education and exert political influence directly or through such organizations as the American Heart Association, American Academy of Pediatrics, and the American College of Cardiology. For example, the American Heart Association Schoolsite Program has presented heart health education to more than 7 million US schoolchildren.

Most pediatric cardiology programs directly include social workers and nurse clinicians as members of the cardiac health care team. A few programs have access to patient ombudsmen and translators. Many hospitals allow rooming in and recognize and help with the other individual needs of parents.

Certain private and charitable organizations offer support for these patients. Some of these include the Variety Club, Ronald McDonald housing programs, Children's Heart Fund, Make-A-Wish Foundation, and the businessman's Wings of Hope program, which uses unoccupied corporate jet seats to allow transportation between the child's home and a cardiac center.

CONCLUSIONS AND RECOMMENDATIONS FOR THE FUTURE

Physicians who provide prenatal, perinatal, and pediatric cardiac care must increase collaborative efforts that will lend insight into identification and care of the at-risk poverty mother at a level equivalent to that offered the affluent. Ways must be found to identify and treat the at-risk pregnant woman. Strategies should be directed toward adequate nutrition, maternal diabetes detection and treatment, substance abuse prevention (including smoking), the effects of maternal age, and the influence of multiple pregnancies. Similarly, research support and activities should evaluate reasons for inadequate follow-up of poor children who have cardiac disease. This could include evaluation of problems with transportation, system access, finances, and disease understanding.

The number of pediatric cardiologists in the United States is limited. To provide the time for provision of equal and adequate care, more must be trained, and that training must be supported. Present resources should be used more discriminantly. For example, pediatric specialists (pediatricians) should be able to examine patients with chest pain and innocent murmurs and provide follow-up for patients with less significant cardiac problems, such as small ventricular septal defects, mild pulmonary stenosis, and the like. This can be accomplished by their gaining greater confidence through continuing education and experience. The medicolegal climate that currently drives pediatric specialists to refer and not to manage such conditions must be modified so that fear of inappropriate litigation is not a factor behind these actions. Likewise, patient attitudes must be modified to accept the pediatric specialist as a consultant and provider for such cases. Ancillary health personnel should be used to greater advantage for patient education, handling minor problems, writing to schools and insurance companies, and handling other paperwork that absorbs much of the pediatric cardiologist's time.

All pediatric cardiac care providers should be sensitive to the problems of the poor. Their practices should be near mass transportation. They should track their patients' follow-up appointments and treatments to assure compliance. This may be accomplished through development of computer databases that are simple enough to be used even by those of us who are not "computer literate." Printed materials and patient teaching materials should be written to the reading level and in the language understood by the patient's parent. When programs are developed that include general population strategies, such as hypertension education and treatment, those materials and programs must be critiqued by the group for whom their use is intended, and those critiques must receive an acceptable response before implementation.

Preventive programs should be coordinated through the school system. After-school care could be provided by parents and siblings from the same population, offering employment opportunities to them that would otherwise not be available. Physical activity programs should include all children without creating embarrassment for any child, even the clumsiest. Exercise should be viewed as fun, and lifelong sport activities should be taught instead of sports in which only a few will achieve success. Not every child will ultimately be a professional athlete. Cafeteria meal planning should address heart-healthy eating habits, and poor children should eat two meals per day at the school site. Cities should provide funding for health clinics based at the school. With these school health clinics, health promotion, not just disease diagnosis, should be emphasized. Children should receive anti-smoking education that is proved to be effective, and tobacco usage advertising directed toward children and the disadvantaged should be outlawed. Other community resources, such as churches and community centers, should be included in development of cardiovascular and other health strategies that will help the poor.

There must be universal access of adequate care to the child with cardiac disease no matter what the socioeconomic status. Medicaid and Crippled Children's Services eligibility and coverage must be improved. Care of those

over age 21 years who had heart problems as children must receive continued funding similar to that provided to patients with cystic fibrosis or hemophilia. Private insurance carriers may wish to consider strategies to cover this group, which might include making a general insurance pool available to all with cardiac disease. If no private solution to the problem is forthcoming, a national health insurance alternative may be the only answer.

These children do not have a voice in politics. The effects of that lack are apparent as their general support has declined despite increases in other segments of the population. These children must be treated fairly, and it is up to us as their providers to be an effective political voice that will be heard on their behalf.

References

1. Clark EB, Takao A. Overview: a focus for research in cardiovascular development. In: Clark EB, Takao A, eds. *Development Cardiology: Morphogenesis and Function*. Mount Kisco, NY: Futura Publishing Co Inc; 1990:3.
2. Roberts NK, Cretin S. The changing face of congenital heart disease: a method for predicting the influence of cardiac surgery upon the prevalence and spectrum of congenital heart disease. *Med Care*. 1980;18:930-939.
3. Ludomirsky A, Garson A Jr. Supraventricular tachycardia. In: Garson A Jr, Bricker JT, McNamara DG, eds. *The Science and Practice of Pediatric Cardiology*. Philadelphia, Pa: Lea & Febiger; 1990:1809.
4. Children's Defense Fund. Testimony of the Children's Defense Fund Before the House Energy and Commerce Committee Subcommittee on Health and the Environment; September 10, 1990; Washington, DC.
5. Sealing PA. *Profile of Child Health in the United States*. Alexandria, Va: National Association of Children's Hospitals and Related Institutions; 1989.
6. National Center for Health Statistics. *Monthly Vital Statistics Report*. Washington, DC: US Dept of Health and Human Services; 1990;39(6):1.
7. Ries P. Americans assess their health: United States, 1987. *Vital Health Stat* 10. 1990; No.174:10.
8. Johnson SF, McCarter RJ, Ferencz C. Changes in alcohol, cigarette, and recreational drug use during pregnancy: implications for intervention. *Am J Epidemiol*. 1987;126:695-702.
9. Curran JW, Jaffe HW, Hardy AM, Morgan WM, Selik RM, Dondero TJ. Epidemiology of HIV infection and AIDS in the United States. *Science*. 1988;239:610-616.
10. Little BB, Snell LM, Klein VR, Gilstrap LC III. Cocaine abuse during pregnancy: maternal and fetal implications. *Obstet Gynecol*. 1989;73:157-160.
11. Correa A, Loffredo C, Ferencz C, Wilson PD. Lead and solvent exposure during pregnancy: possible risk of cardiovascular malformations (CVM). *Teratology*. 1990;41:545.
12. Ferencz C, Neill CA, Brenner JI, Perry LW, Martin GR. Ventricular septal defect in infants: an eight-year population-based study. *Am J Cardiol*. 1990;66:524.
13. Griffiths SP, Gersony WM. Acute rheumatic fever in New York City (1969 to 1988): a comparative study of two decades. *J Pediatr*. 1990;116:882-887.
14. Land MA, Bisno AL. Acute rheumatic fever: a vanishing disease in suburbia. *JAMA*. 1983;249:895-898.
15. Bisno AL, Ferguson GW, Shultz JM. Epidemiology of acute rheumatic fever in Miami, Florida, USA, 1984-1988. XI Lancefield Symposium on Streptococci and Streptococcal Diseases; September 10-14, 1990; Siena, Italy. Abstract L37.
16. Taubert KA, Rowley AH, Shulman ST. A U.S. nationwide hospital survey of Kawasaki disease (KD) and acute rheumatic fever (ARF), 1984-1987. Interscience Conference on Antimicrobial Agents and Chemotherapy; September 17-20, 1990; Houston, Tex. Abstract 827.
17. Veasy LG, Wiedmeier SE, Orsmond GS, et al. Resurgence of acute rheumatic fever in the intermountain area of the United States. *N Engl J Med*. 1986;316:421-427.
18. Congeni B, Rizzo C, Congeni J, Sreenivasan VV. Outbreak of acute rheumatic fever in northeast Ohio. *J Pediatr*. 1987;111:176-179.
19. Wald ER, Dashefsky B, Feidt C, Chiponis D, Byers C. Acute rheumatic fever in western Pennsylvania and the tristate area. *Pediatrics*. 1987;80:371-374.
20. Hosier DM, Craenen JM, Teske DW, Wheller JJ. Resurgence of acute rheumatic fever. *AJDC*. 1987;141:730-733.
21. Westlake RM, Graham TP, Edwards KM. An outbreak of acute rheumatic fever in Tennessee. *Pediatr Infect Dis J*. 1990;9:97-100.
22. Newacheck PW. Improving access to health care for children, youth, and pregnant women. *Pediatrics*. 1990;86:626-635.
23. Steinhardt BJ, DeCuypere M. *Assuring Children's Access to Health Care: Fixing the Medicaid Safety Net*. Alexandria, Va: National Association of Children's Hospitals and Related Institutions; 1989.
24. *Medicaid Source Book: Background Data and Analysis*. Washington, DC: Congressional Research Service; November 1988.
25. Oberg CN. Medically uninsured children in the United States: a challenge to public policy. *Pediatrics*. 1990;85:824-833.
26. Waxman HA. Kids and Medicaid: progress but continuing problems. *Am J Public Health*. 1989;79:1217-1218.
27. Hu DJ, Covell RM, Morgan J, Arcia J. Health care needs for the children of the recently homeless. *J Community Health*. 1989;14:1-8.
28. Committee on Community Health Services. Health needs of homeless children. *Pediatrics*. 1988;82:938-940.

Pediatric Acquired Immunodeficiency Syndrome, Poverty, and National Priorities

Margaret C. Heagarty, MD

Human immunodeficiency virus (HIV) infection or acquired immunodeficiency syndrome (AIDS), as found in children, represents a microcosm of the problems and failures of this nation's health care system for the poor.

EPIDEMIOLOGY

When Oleske et al¹ and Rubenstein et al² first described the disease in children, it was not evident that AIDS was to become a disease found predominantly in poor children of minority status. But in the years since those first reports appeared, epidemiologic studies have demonstrated that AIDS in children is largely acquired through perinatal transmission from HIV-infected mothers who are or have been involved in intravenous drug use or who have had intercourse with someone involved in the drug culture. About 15% of children with AIDS are hemophiliacs or others who were infected by contaminated blood products before the advent of the national universal HIV blood screening program. Presumably, the number of transfusion-related cases will decrease with time.

To date, children with AIDS have been found in most urban areas of the country, but the disease continues to cluster in three distinct geographic areas: low-income areas of New York City, Northern New Jersey, and Miami, Fla. Those who live in these disadvantaged communities are of either African American or Hispanic origin; 53.4% of children with AIDS are from New York, New Jersey, or Florida, and 77.5% are of either Hispanic or African American ethnicity.³ Since many are children of intravenous drug-using parents, some of whom have AIDS themselves, they and their parents live on the fringes of their disadvantaged communities, often isolated from their larger families or from other social supports that might be more easily mobilized for other, more advantaged groups with such a serious, lethal disease. In short, most children with AIDS and their families come largely from the most socially disorganized, economically deprived segments of our society.

PROGNOSIS

During the recent past, the prognosis for children with AIDS has improved for two reasons. First, pediatricians in areas in which the disease is prevalent have become more experienced in its early diagnosis and in the use of vigorous antibiotic therapy for bacterial infections to

which these children are particularly prone. Second, research and development of scientific antiviral therapy for children, which, at times, has seemed too slow and too little, has finally become available in most areas in which significant numbers of children with the disease are found. While much more research is required before we fully understand AIDS and therefore its medical treatment, by now, some 10 years into the AIDS epidemic, the prognosis for children with AIDS has improved. Nevertheless, these children and their families face a complicated, chronic disease with a very guarded prognosis.

MEDICAL CARE SYSTEM

Because these children and their families are poor, they must also face a system that at times seems designed to impede rather than facilitate the provision of medical care. During the past 40 or more years, local and federal governments have developed a series of social and financial supports for the poor. However, the statutory and regulatory requirements of these programs are so complex, dysfunctional, fragmented, and disorganized that professionals providing care for these families often spend as much or more time dealing with a variety of local, state, and federal governmental bureaucracies as they do providing direct medical care or social support. In our zeal to make absolutely certain that no rascals or scoundrels get something to which we judge they are not entitled, we have constructed paper edifices and barriers that no one could easily master. We wonder why the most socially disorganized and disadvantaged members of our communities have trouble "getting on Medicaid" or registering for this or that social program. Indeed, we sometimes blame them, call them unmotivated, noncompliant, or worse. Since I have an acute anxiety attack when facing a Bureau of Motor Vehicles for a driver's license, I suspect that I, and probably most of us, would decompensate entirely if we had AIDS and had to try to qualify for Medicaid or Social Security benefits.

Finally, more than half the cases of AIDS reported to the Centers for Disease Control, Atlanta, Ga, have come from only 15 cities in this nation. Because our major urban disadvantaged communities contain large numbers of intravenous drug users and because HIV is transmitted via the shared needles of intravenous drug users, the prevalence of HIV infection in these communities is very high. This increased prevalence of the infection has led to rapid spread, not only among the intravenous drug-using population, but also by heterosexual contact among adults who do not use drugs. It is not uncommon to make the diagnosis of AIDS in a child of a woman who is not a drug

Accepted for publication January 3, 1991.

¹From the Department of Pediatrics, Harlem Hospital Center, and the College of Physicians and Surgeons of Columbia University, New York, NY.

Reprinted from *AJDC* (1991;145:527-528).

user and who is completely unaware that she has acquired the HIV infection from an infected sexual partner.

Because AIDS in children is a disease of the urban poor, the public general hospitals in our major cities provide much, if not most, of their medical care. In the best of times, these city or county hospitals are underfinanced, embattled medical care institutions of last resort. Historically, they have survived in a financial hand-to-mouth existence, relying on funds from local governments to subsidize the cost of care for the medically indigent. Unfortunately, these same cities are also besieged by the current drug epidemic so that these institutions must deal not only with the increased burden of AIDS, but also with the morbidity and mortality associated with crack/cocaine.

While their public health institutions are struggling to cope with these serious problems, these municipalities, particularly those in the Northeast, also face serious economic problems. Despite the increased needs associated with AIDS and the drug epidemic in these cities, medical and social care systems for the poor must cope with fixed or declining resources. This serious lack of resources imperils the care not only for children with AIDS, but for all who must rely on these systems for medical care.

EFFECT ON THE FAMILY

Any serious, chronic disease obviously affects the function of the entire family, including adults and siblings, as well as the ill child. But AIDS is even more catastrophic for families. Because most children have been infected by their mothers during pregnancy, the family must deal not only with the disease in the child, but also in the mother and often in the father. While the problems of children with AIDS have been widely publicized in the lay press, the fact that virtually all their mothers are infected and thus at risk for developing the disease has not been equally appreciated. However, estimates from the New York City Department of Health suggest that in that city alone, some 40 000 children may be orphaned by AIDS during the next decade (Pauline Thomas, MD, director of AIDS and HIV Surveillance, oral communication, September 1990). Finally, despite considerable efforts at public and professional education, the fear of AIDS with the resulting discrimination makes the care and support of these unfortunate children and their families even more problematic.

A CALL TO ACTION

The story of AIDS in children mirrors our lack of concern for the poor children of this nation. In our current national

obsession with budget deficits, the needs of constituencies with political power, and foreign policy issues, the care and welfare of the nation's children do not seem to have a high priority in the national agenda. While our political rhetoric may deny such an assertion, actions speak louder than words. The reality is that we are unwilling to provide the resources necessary to provide medical care to children with AIDS, to provide medical care to all poor children, or even to provide them with adequate housing or education.

To solve the problems of children with AIDS and indeed of all poor children, we must develop a simple method of financing medical care for the poor. For large numbers of families and children to have no access to medical care because of a lack of financial resources is simply unacceptable. Over the years, any number of proposals to remove the financial barriers to health care have been debated. A detailed analysis of these proposals is beyond the scope of this essay, but one thing is clear: any remedy to this problem must have much simpler administrative procedures than does our current highly bureaucratic Medicaid system. While money is a necessity, it is not sufficient for the humane care of these children and their families who represent some of the most socially isolated and bereft of our society. We must develop social support, housing, and respite systems that afford them the compassion and care that any of us would need in the face of such a devastating illness.

A nation that neglects its children places itself in greater danger than any foreign power could possibly muster. The cliché is true: children are the future of the country. If we do not begin to attend to the needs of children with AIDS, indeed all children in poverty, the final judgment of history will surely be very harsh indeed.

References

1. Oleske J, Minnefor A, Cooper R Jr, et al. Immunodeficiency syndrome in children. *JAMA*. 1983;249:2345-2349.
2. Rubenstein A, Sicklick M, Gupta A, et al. Acquired immunodeficiency with reversed T4/T8 ratios in infants born to promiscuous and drug addicted mothers. *JAMA*. 1983;249:2350-2356.
3. Centers for Disease Control. *HIV/AIDS Surveillance Report*. Atlanta, Ga: Centers for Disease Control; September 1990:1-18.

Pediatric Human Immunodeficiency Virus Infection and the Acquired Immunodeficiency Syndrome

A Health Care Crisis of Children and Families

Russell B. Van Dyke, MD

● The number of children infected with the human immunodeficiency virus (HIV) is rapidly increasing. Most infected children acquire their infection by vertical transmission from an infected mother, and this increase in the number of infected children reflects a similar increase in the number of infected women. Many features of HIV infection in children differ from those in adults, and it is important for the physician to be familiar with the varied presentations of pediatric HIV infection. Transmission of HIV during adolescence, by sexual contact and illicit drug use, is also a growing problem, accounting for most cases of acquired immunodeficiency syndrome (AIDS) seen in young adults in their 20's. The HIV-infected child represents only one member of a family affected by the HIV virus; frequently, multiple other members of the family are infected as well. These families are predominantly underprivileged, coming from inner city minority populations with limited access to medical care and social service support. Pediatric AIDS is a preventable disease, by the prevention of HIV infection in women. In short term, it is likely that education will have the greatest impact on altering the course of the AIDS epidemic. Most infected children are cared for in a limited number of public inner city hospitals, and the ability of these hospitals to continue to provide adequate care will be threatened by the rising number of cases. A multidisciplinary approach to providing care for these children and their families is essential, with the primary care physician coordinating this effort. Rapid advances in the treatment of HIV and its associated opportunistic diseases raise difficult questions concerning the access of women, including pregnant women, and children to clinical trials of investigational agents. The commitment of individual health care workers and an increased level of financial support will be necessary to provide the care that these children and their families require and deserve.

The acquired immunodeficiency syndrome (AIDS) was first recognized in the United States in 1981 as a disease occurring in homosexual men. However, as the epidemic evolved, the disease appeared in other groups, including hemophiliacs, intravenous drug users, women, and children. Currently, children less than 13 years of age comprise 1.8% of all cases of AIDS in the United States; by the end of 1991, it is estimated that there will be ap-

proximately 3000 pediatric AIDS cases in the United States. Most cases of AIDS in children result from the vertical transmission of human immunodeficiency virus (HIV) from an infected mother to her child, and the rising number of pediatric AIDS cases reflects a parallel rise in the number of HIV-infected women. Between 20% and 40% of infants born to an HIV-infected mother become infected themselves.¹⁻³ Factors that influence the transmission rate are not clearly defined, but maternal antibodies directed against specific portions of HIV surface glycoproteins appear to be an important factor in protecting the infant from infection.⁴⁻⁶

The proportion of AIDS cases in the United States that occur in women has been rising steadily since the onset of the epidemic and currently stands at 11% of all reported cases. Between 1988 and 1989, the number of cases in women increased by 29%, while the number in men rose by only 18%.⁷ Approximately one half of women with AIDS acquired their infection through parenteral drug use, while one third acquired their infection through heterosexual transmission. Most HIV-infected women are of childbearing age. The proportion of AIDS cases in the United States due to heterosexual transmission increased from 0.9% in 1983 to 6% in 1990, with this rise expected to continue. This emphasizes that HIV is fundamentally a sexually transmitted disease, spread by both heterosexual and homosexual contact. Heterosexual transmission is the principal route of transmission of HIV in many developing countries and is playing an increasingly important role in the United States.

Although many of the clinical features of HIV infection are similar in adults and children, some are unique to children.⁸ The typical clinical presentation of pediatric AIDS includes growth failure, developmental delay, hepatosplenomegaly, diffuse lymphadenopathy, recurrent bacterial infections, and chronic *Candida* infections. However, in many children the infection presents in an atypical fashion, manifesting isolated features of the disease, such as thrombocytopenia, pneumonia, parotitis, diarrhea, recurrent infections, failure to thrive, or loss of developmental milestones. Involvement of the central nervous system is a particularly important problem in children with HIV infection. Since children have not yet reached physical and developmental maturity, early features of HIV infection include poor growth and loss of mental and motor milestones. The immunologic immaturity and naïveté of children makes them prone to recurrent infections with common bacterial pathogens.

Infection with HIV must now be considered when a

Accepted for publication January 28, 1991.

From the Section of Pediatric Infectious Diseases, Department of Pediatrics, Tulane University School of Medicine, New Orleans, La.
Reprinted from *AJDC* (1991;145:529-532).

broad range of common and uncommon clinical syndromes are seen in children. Testing for HIV should be performed as part of the diagnostic evaluation of these children, whether or not risk factors for HIV infection are present. Consequently, the clinician must understand the difficulties in establishing HIV infection in children, particularly in those less than 15 months of age, in whom maternal antibody can result in a falsely positive HIV antibody test.⁹ The results of HIV testing must be kept confidential. I believe that parents should be informed whenever HIV testing is performed on their child, but informed consent is usually not required unless mandated locally. Concerns about confidentiality should not prevent a child from being examined for HIV infection when appropriate.

Infection with HIV in the adolescent is a problem that deserves special attention. Currently, only 3.8% of AIDS cases in the United States occur in individuals between 13 and 19 years of age. However, the proportion of cases in this age group due to heterosexual transmission has increased substantially in recent years and currently stands at 23% for male patients and 44% for female patients.¹⁰ Females currently make up 20% of adolescents with AIDS, in contrast to only 9% of adults with AIDS, further pointing out that heterosexual transmission plays a major role in the spread of HIV during adolescence.

Furthermore, these figures underestimate the importance of HIV transmission during adolescence. Currently, 20% of all cases of AIDS occur in young adults between 20 and 29 years of age. Since the median incubation period of AIDS in adults is between 8 and 10 years, the majority of individuals who develop AIDS in their 20's acquired their HIV infection during adolescence. The growing problem of HIV transmission during adolescence requires a response directed toward prevention of infection. This is particularly important in light of the increasing proportion of adolescents who are sexually active. At the present time in the United States, 32% of 16-year-old girls and 70% of 18-year-old women engage in premarital sexual activity.¹¹ There are several reasons why adolescents are at increased risk of HIV infection: they have a greater risk of other sexually transmitted diseases than older persons, they are less likely to use barrier methods of contraception, and they frequently have multiple sexual partners.¹² However, adolescents are receptive to being taught about AIDS; Steiner et al¹³ demonstrated an excellent level of knowledge about this disease among a group of adolescents in Wisconsin. One hopes that these young adults will apply this knowledge to their own behavior.

Pediatric AIDS is not only a disease of the child; it is a disease of the whole family unit. Eighty percent of children with AIDS, and nearly all seropositive infants, have a mother who is HIV infected. Frequently, the mother's sexual partner is infected, and other children in the family may be infected as well. A disproportionate number of children with AIDS belong to minority groups; 53% are black and 23% Hispanic. Most cases occur in inner-city populations, which suffer from poverty, racism, illicit drug use, inadequate housing, poor access to medical care, and a nonintact family unit. As the HIV infection progresses in the child's parents, they are unable to care adequately for themselves and their child, and it falls on the extended family or the community to provide this care. These children are very difficult to place in foster care and hospice care. Not surprisingly, then, the hospital often

provides this care, resulting in a large number of hospitalized "boarder babies" in regions with a large number of pediatric AIDS cases. At Harlem Hospital (New York, NY), more than 20% of hospitalizations of children with AIDS resulted from social problems rather than medical needs. The mean length of stay for these boarder babies was 339 days, as opposed to 89 days for children cared for at home.¹⁴ The cost of this care is great; in that report from 1988, the authors estimated the mean lifetime hospital cost for a child with AIDS to be greater than \$90 000. The increased use of outpatient services and foster care substantially reduces unnecessary hospitalizations among these children.¹⁵

Pediatric AIDS has its greatest impact on those minority groups that have the poorest access to medical care and are least likely to benefit from advances being made in the prevention and treatment of this disease. Indeed, more than any other disease, pediatric AIDS highlights the deficiencies in the health care system that exists in the United States today. Our efforts at delivering health care to these disadvantaged children have not been completely successful. For example, less than two thirds of nonwhite children in the United States are up to date in their immunizations at 2 years of age.¹⁶ It can only be hoped that we will be more successful at delivering preventive and therapeutic care to HIV-infected children.

The rising number of children with AIDS will impact all areas of health care and rapidly overwhelm those areas where cases are concentrated. Infection with HIV is currently the ninth leading cause of death among children aged 1 to 4 years in the United States. By the end of 1991, it is anticipated that children with AIDS will occupy 10% of all pediatric hospital beds in the United States.¹⁷ Most of these children will not have private health insurance, and their medical care will be funded by such public sources as the Medicaid program. Of the children in our pediatric HIV clinic, approximately 90% qualify for Medicaid through the Aid to Families With Dependent Children program. An additional 5% qualify through participation in the Supplemental Security Income program, which is available only to those children who carry an AIDS diagnosis. The remaining 5% of children have other sources of insurance or do not qualify for Medicaid. Unfortunately, each state administers its own Medicaid program, and states have differing eligibility criteria and benefits. In many states, the level of reimbursement is too low to meet adequately the needs of the child. In addition, home nursing care, ambulatory care, foster care, hospice care, and social service support may not be available or have limited benefits in some states. Finally, many health care providers do not accept Medicaid patients, further limiting access of these children to medical care.

The impact of pediatric AIDS on the practice of pediatrics and the training of young pediatricians needs to be addressed. All pediatric subspecialists will need to develop expertise in the problems of HIV-infected children. However, in most instances, the pediatrician or family practitioner will provide primary care for these children. In the ideal situation, the primary care physician will work with a team of specialists, including pediatric subspecialists, nurses, social workers, nutritionists, and developmentalists. The assessment and treatment of HIV-infected children must become part of the curriculum of all pediatric and family practice training programs. It is hoped that the increasing number of HIV-infected children will not be

seen as a deterrent to those entering the field of pediatrics, but rather as a challenge to those committed to the health of children and their families.

A major concern raised by those caring for HIV-infected children has been a delay in access to new forms of treatment. Children have traditionally been excluded from clinical trials involving new medications until efficacy has been demonstrated in adults. The intent of this is to protect the child from possible adverse effects of a new medication until efficacy is established and the profile of adverse reactions is known. Unfortunately, it also delays the initiation of clinical trials in children and ultimately the availability of effective new forms of therapy. For instance, zidovudine was not available to children until clinical trials in adults were completed. The AIDS Clinical Trials Group, a collaborative group of AIDS researchers funded by the National Institutes of Health, has an active group of pediatric investigators responsible for designing and conducting clinical trials in HIV-infected children. This group has been very vocal in this concern, and children and women are currently benefiting from early involvement in the evaluation of promising new agents.

A question that arises in designing treatment protocols for children is whether results obtained in adult trials should be applied to children. An example is the recent demonstration that the early administration of corticosteroids increases survival in adults with *Pneumocystis carinii* pneumonia.¹⁸ There is reason to suspect that pediatric *P. carinii* pneumonia may respond differently than adult disease, because it represents primary infection rather than reactivation disease. The pediatric members of the AIDS Clinical Trials Group are currently considering whether a similar trial should be conducted in children.

What should the response of the medical community be to the growing problem of HIV-infected children? In the short term, the most successful response to the AIDS epidemic will be in the area of prevention. Pediatric AIDS is a preventable disease—by the prevention of HIV infection in women of childbearing age. To protect themselves, all young adults must understand, before they become sexually active, that HIV is a sexually transmitted disease. They need access to counseling about HIV and other sexually transmitted diseases, and they need to know how to protect themselves from infection, including the use of condoms. In addition, they need to understand the risk of parenteral drug use. Information about HIV transmission and AIDS must be taught to all children while they are in middle or junior high school. Finally, women need greater access to HIV testing so that pregnancy prevention and termination can be considered by those who are infected. Guidelines for HIV testing of pregnant women have been published.¹⁷

The development of new forms of treatment for HIV and the opportunistic diseases associated with AIDS must be of the highest priority. It is gratifying that the AIDS Clinical Trials Group has recently identified pediatrics as a major area of emphasis, and funds have been made available for additional sites to conduct pediatric studies. Both clinical research and basic research in the field of AIDS deserve additional support.

It is currently unknown whether HIV infection can be prevented in the child born to an infected mother. We are hindered by a lack of understanding of two key points: when during gestation and delivery the child becomes in-

fectured, and why only one of three infants born to an infected mother becomes infected. The AIDS Clinical Trials Group is initiating a study to determine whether the administration of zidovudine during the second and third trimesters of pregnancy, and continued in the infant for 6 weeks after delivery, will interrupt perinatal transmission. Other strategies for the prevention of perinatal transmission being considered include passive and active immunization of the woman before delivery and the prevention of infection in the child after delivery by the administration of such agents as recombinant CD4, which blocks infection from being established. We clearly need to learn much more about the mechanism and immunology of perinatal HIV infection.

Because of the complex medical and social needs of HIV-infected children and their families, a multidisciplinary team approach to providing care is necessary. In our Pediatric HIV Clinic at Charity Hospital of New Orleans (La), primary ongoing care is provided by general pediatricians with an interest in HIV disease, supported by pediatric subspecialists in infectious diseases, hematology, neurology, and other subspecialties. Adolescents infected with HIV are cared for by an adolescent medicine physician in the pediatrics clinic. We are currently developing a combined mother-child clinic to allow HIV-infected mothers and their infants to be seen at the same clinic visit. This takes advantage of our observation that HIV-infected women are much more compliant with their child's care than with their own care. A case manager/social worker is assigned to each family to assist with financial arrangements, transportation to and from the clinic, home health care, and referrals to other health care agencies. Finally, a pediatric therapist and clinical psychologist assist in neurodevelopmental evaluations and provide physical therapy.

This multidisciplinary approach to providing care is expensive and requires the commitment of a large group of health care professionals. Funds must be made available to support these programs, and personnel must be trained to provide the care. Developed countries, such as the United States, have the resources to deliver this care; it remains to be seen whether we have the wisdom to insist that it be done.

References

1. The European Collaborative Study. Mother-to-child transmission of HIV infection. *Lancet*. 1988;2:1039-1043.
2. Blanche S, Rouzioux C, Moscato MG, et al. A prospective study of infants born to women seropositive for human immunodeficiency virus type 1. *N Engl J Med*. 1989;320:1643-1648.
3. Willoughby A, Mendez H, Goedert J, et al. Natural history of infants born to HIV-positive women. Program and abstract of the Fifth International Conference on AIDS; June 4-9, 1989; Montreal, Quebec. Abstract MBO 2.
4. Davish Y, Calvelli TA, Wood DG, et al. Vertical transmission of human immunodeficiency virus is correlated with the absence of high-affinity/avidity maternal antibodies to the gp120 principal neutralizing domain. *Proc Natl Acad Sci U S A*. 1990;87:3445-3449.
5. Rossi P, Moschese V, Broliden PA, et al. Presence of maternal antibodies to human immunodeficiency virus 1 envelope glycoprotein gp120 epitopes correlates with the uninfected status of children born to seropositive mothers. *Proc Natl Acad Sci U S A*. 1989;86:8055-8058.

6. Goedert JJ, Mendez H, Drummond JE, et al. Mother-to-infant transmission of human immunodeficiency virus type 1: association with prematurity or low anti-gp 120. *Lancet*. 1989;2:1351-1355.
7. Centers for Disease Control. AIDS in women—United States. *MMWR*. 1990;39:845-846.
8. Falloon J, Eddy J, Wiener L, Pizzo PA. Human immunodeficiency virus infection in children. *J Pediatr*. 1989;114:1-30.
9. Husson RN, Comeau AN, Hoff R. Diagnosis of human immunodeficiency virus infection in infants and children. *Pediatrics*. 1990;86:1-10.
10. Centers for Disease Control. *HIV/AIDS Surveillance Report 11*. Atlanta, Ga: Centers for Disease Control; November 1990:1-18.
11. Centers for Disease Control. Premarital sexual experience among adolescent women—United States 1970-1988. *MMWR*. 1991;39:929-932.
12. Cates W Jr. The epidemiology and control of sexually transmitted diseases in adolescents. *Adolesc Med*. 1990;1:409-427.
13. Steiner JD, Sorokin G, Schiedermayer DL, Van Susteren TJ. Are adolescents getting smarter about acquired immunodeficiency syndrome? *AJDC*. 1990;144:302-306.
14. Hegarty JD, Abrams EJ, Hutchinson VE, et al. The medical care costs of human immunodeficiency virus-infected children in Harlem. *JAMA*. 1988;260:1901-1905.
15. Kemper K, Forsyth B. Medically unnecessary hospital use in children seropositive for human immunodeficiency virus. *JAMA*. 1988;260:1906-1909.
16. Centers for Disease Control. *U.S. Immunization Survey*. Atlanta, Ga: Centers for Disease Control; 1986.
17. Working Group on HIV Testing of Pregnant Women and Newborns. HIV infection, pregnant women, and newborns: a policy proposal for information and testing. *JAMA*. 1990;264:2416-2420.
18. Bozzette SA, Statler FR, Chiu J, et al. A controlled trial of early adjunctive treatment with corticosteroids for *Pneumocystis carinii* pneumonia in the acquired immunodeficiency syndrome. *N Engl J Med*. 1990;323:1451-1457.

New Initiatives in Adolescent Health Promotion

Arthur B. Elster, MD

Health issues facing adolescents have changed dramatically over the last several decades.¹ Twenty years ago, adolescent morbidity and mortality were associated predominantly with natural causes. Adolescents today, however, are endangered predominantly by their own behaviors. Drinking, tobacco and drug use, pregnancy, sexually transmitted diseases, and injuries take a major toll on youth and place them at risk of developing disease as adults. Because these health risks do not lend themselves to traditional models of medical intervention, greater emphasis is needed on prevention as a way to improve the health and well-being of adolescents.

The process of identifying and implementing a broad prevention strategy has gained momentum with the recent release of two documents by the US Public Health Service (PHS):— *Healthy People 2000: The National Health Promotion and Disease Prevention Objectives*² and *the Guide to Clinical Preventive Services*.³ Unfortunately, pediatricians and other health care professionals treating adolescents have been relatively quiet in the national dialogue stimulated by these documents. Because the information contained in these two reports can, however, affect the provision of health care to adolescents, they are worth reviewing.

Healthy People 2000 was developed to focus "... a national strategy for significantly improving the health of the Nation over the coming decade."² The initiative promotes three broad health goals: "(1) increase the span of healthy life for Americans; (2) reduce health disparities among Americans; and (3) achieve access to preventive services for all Americans." To meet these goals, the PHS defined 22 areas for special emphasis. Eight relate to health promotion topics (eg, physical activity and fitness, mental health, and mental disorders), five involve health protection topics (eg, unintentional injuries and oral health), eight involve preventive services for targeted issues (eg, sexually transmitted disease and maternal and child health), and one relates to surveillance and data systems. Except for surveillance and data systems, each area includes health status, risk reduction, and service and protection objectives. Of the almost 300 national health objectives in the document, 45 target adolescents directly, and approximately 51 affect adolescents as part of the broader population. An introductory section of the document delineates the predominant health problems experienced by various age groups (including adolescents) and by special populations, such as people with low income, minorities, and the disabled.

The Guide to Clinical Preventive Services, the final report of the US Preventive Services Task Force,³ describes 169 clinical screening, counseling, and immunization practices recommended for treatment or therapy of 60 target conditions. The procedures are grouped by patient age, including preadolescents (aged 8 to 12 years), young adolescents (aged 13 to 17 years), and older adolescents (aged 18 to 24 years). Only those conditions for which effective preventive intervention procedures exist or that cause a high "burden of suffering" were addressed in the report. Most of the conditions relating to adolescents qualified for inclusion in the latter category.

For at least four reasons, these two documents are important to those who work to improve the health of adolescents. First, they direct the debate on improving adolescent health to developing and implementing more effective preventive strategies. Most adolescent preventive interventions now are provided by schools, churches, youth organizations, or media campaigns. Not only do the PHS documents promote these methods of intervention, but they also renew interest in how physicians and other health care providers can provide effective preventive services in the office. Second, these documents present a framework for actions that can be taken by both the private and public health sectors. They provide impetus for the development of new strategies for physicians and health professionals who work in both traditional (eg, hospitals and private, community, and public health clinics) and nontraditional (eg, school clinics, correctional institutions, and drop-in centers) settings. Third, *Healthy People 2000* provides a structure for focusing human and financial resources. States, communities, and health organizations can use it to determine health priorities for their populations. With clearly defined objectives, organizations and health care professionals can better coordinate their efforts, producing a more efficient and comprehensive preventive health strategy. As called for in the recent report from the National Commission on the Role of the School and the Community in Promoting Adolescent Health,⁴ better access to appropriate, comprehensive, coordinated, and confidential health services is necessary to solve the complex array of adolescent health problems. Providing such services will require cooperation and focused efforts from all segments of the health care community. Fourth, the PHS documents set goals that provide opportunities that allow for research on the effectiveness of various prevention strategies. As preventive interventions are developed and implemented, a rigorous agenda for evaluation of research must be followed to determine how best to use scarce health care funds.

Neither the national health objectives nor the *Guide to Clinical Preventive Services* has received universal

Accepted for publication January 11, 1991.

From the Department of Adolescent Health, American Medical Association, Chicago, Ill.

Reprinted from *AJDC* (1991;145:495-496).

approval. The public health care community is concerned that the national health objectives "... have no implementation plan, they overemphasize individual responsibility, and they abrogate governmental responsibility."⁵ Critics also state that preventive health goals cannot be achieved without additional federal funding and that the multifunded nature of the US health care system precludes effective implementation.⁶ The professional pediatric community has criticized the *Guide* because it recommends a specified frequency of preventive health visits for adults while leaving the frequency of such visits by adolescents and children to the discretion of the provider.⁷ Other concerns are that the recommendations do not include all pediatric preventive health practices and that they tend to overemphasize change in existing behavior rather than focusing on anticipatory guidance as a way to prevent the onset of health-compromising behavior. In general, the *Guide* fails to recognize many of the risks that endanger adolescents specifically and the opportunity for promoting healthy behaviors during this developmental period. Although the *Guide* clearly "shortchanges" children and youth, it and *Healthy People 2000* together provide health professionals, administrators, and the federal government a structure on which to build sound preventive health strategies for adolescents.

It is important that advocates of adolescent health work to ensure that the interests of adolescents are well represented as the nation begins to implement broad intervention strategies for preventive health. Because adolescents and children are not empowered politically, adolescent health concerns easily may be overshadowed by concerns of other populations.

Various organizations have been funded by the PHS to promote the national health objectives as they relate to special populations or settings, such as Hispanics, blacks, schools, and hospitals. As part of these efforts, the American Medical Association received funds to be used in the dissemination of information related to adolescents. For information on this initiative for adolescents, write to the Department of Adolescent Health, AMA, 515 N State St, Chicago, IL 60610. For general information, write to the Office of Disease Prevention and Health Promotion, Department of Health and Human Services, Washington, DC 20201.

References

1. Gans JE, Blyth DA, Elster AB, Gaveras LL. *America's Adolescents: How Healthy Are They?* Chicago, Ill: American Medical Association; 1990.
2. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington, DC: Department of Health and Human Services; 1990. US Public Health Service publication 017-001-00474-0.
3. US Preventive Services Task Force. *Guide to Clinical Preventive Services*. Baltimore, Md: Williams & Wilkins; 1989.
4. National Commission on the Role of the School and the Community in Promoting Adolescent Health. *Code Blue: Unit-ing for Healthier Youth*. Chicago, Ill: American Medical Association; 1990.
5. *Nation's Health: Year 2000 Objectives Are Important, But Imperfect Guide*. Washington, DC: American Public Health Association; 1990.
6. *Media Information Alert*. Washington, DC: Advocacy Institute; November 14, 1990.
7. *AAP News: From the President*. Elk Grove Village, Ill: American Academy of Pediatrics; February 1990.

Care of the Poor and Underserved in America

Older Adolescents: A Group at Special Risk

Robert J. Haggerty, MD

Jeff, a 19-year-old who dropped out of school after tenth grade, has lived "emancipated" for the past 3 years on his own in New York, and survived for a time as a male prostitute. At a community health center he was recently discovered to have AIDS. When his disease progressed far enough to require hospitalization, it was found that he was ineligible for Medicaid without a prior assessment of whether his parents' health insurance covered him. But he did not want his parents to know that he had AIDS. While this may be seen as a problem with Jeff's pride, the fact that there is not presumptive eligibility for Medicaid, as there is for pregnancy, is a failure of our health system. This catch-22 situation is extreme, to be sure, but Jeff is one example of a group of poor and underserved children often forgotten by pediatricians and, indeed, by society: young people roughly 16 to 24 years of age who drop out of high school or do not go on to any further education.

The William T. Grant Commission on "Youth and America's Future"¹ labeled this group "the forgotten half." There are many other groups of children who are poor and underserved in America. Other authors in this issue address these. Older adolescents and youth are often forgotten by pediatricians and society.

Why are the forgotten half a problem today? In past decades, the majority of young people did not graduate from high school, and certainly not from college. Why are they now part of the growing population of poor and underserved young people? Because the world, especially the United States, has changed. The job opportunities for today's young workers who begin their careers with only a high school diploma or less are far more constrained than they were 15 or 20 years ago. Jobs in manufacturing that offer pay sufficient to raise a family are far less available for this group than they were 20 years ago. Unemployment for this age and educational group is high, irrespective of race, but especially for black and other minority youth. And even those with jobs have had a steep decline in income. The mean earnings of young male workers (from 20 to 24 years of age) dropped from \$12 166 in 1973 to \$9027 in 1984 (and the figures are probably even lower today). For those young men who are trying to head a family, the decline in earnings is striking (Fig 1, Table 1). If the family is headed by a woman or belongs to a minority group (or both), the decline in income is even greater. Between 1967 and 1986 the poverty rate among young families has doubled (Fig 2, Table 2).

The changing economy, which calls for workers in high-

skill jobs rather than manual jobs, has led to a sharp increase in a new poor and underserved group.

CONSEQUENCES OF A POOR JOB MARKET

We usually do not think of the health and related problems that result from poor jobs, but they are many. Because unemployed men, or even those with full-time but dead-end jobs at minimum wage, cannot support families, young women are quite understandably reluctant to marry them. Yet given current sexual practices, they have their children. Unwed teen pregnancy can be a consequence of poor jobs. High school graduates earn more than non-high school graduates, and are more likely to be married (Fig 3). Lack of coverage by health insurance is a major problem for this age group, especially for those with low-paying and part-time jobs that traditionally offer little employee health insurance. However, these young people, when employed, earn slightly above the Medicaid eligibility level. They are in limbo regarding health insurance. One major finding of several research groups is the large number of fully employed young men who earn too little to support a family, have no health insurance, and have a high risk of health problems.

While this presents a bleak picture, we should not blame the victim. A particularly revealing finding of the W. T. Grant Foundation's Commission is that the vast majority of youth are trying to get jobs, trying to "make it" (82% of the 20- to 24-year-olds are in the work force). It is not that we have a generation of lazy workers. Young people today seem little different from those of the past. Interviews with hundreds of inner-city and rural young people in the forgotten half study demonstrate that they have the same aspirations and willingness to work as those who go on to college, but our current economy has far fewer places for such youth, and the health consequences are great.

Certainly not all cases of substance abuse, teen pregnancy, sexually transmitted diseases, acquired immunodeficiency syndrome, and low-birth-weight babies come from this group, but for a variety of reasons the risk of all of these problems is greater among the forgotten half. In addition, these problems often cluster together in the same individuals, thus geometrically compounding the problem. The medical system has greater difficulty dealing with these problems in people from this group, since they have so many associated social problems.

WHY SHOULD PEDIATRICIANS BE CONCERNED?

Young people 16 to 24 years of age have not traditionally been the responsibility of pediatricians. Why should we now focus on this group? I believe that pediatricians

Accepted for publication November 19, 1990.

From the William T. Grant Foundation, New York, NY.

Reprinted from *AJDC* (1991;145:569-571).

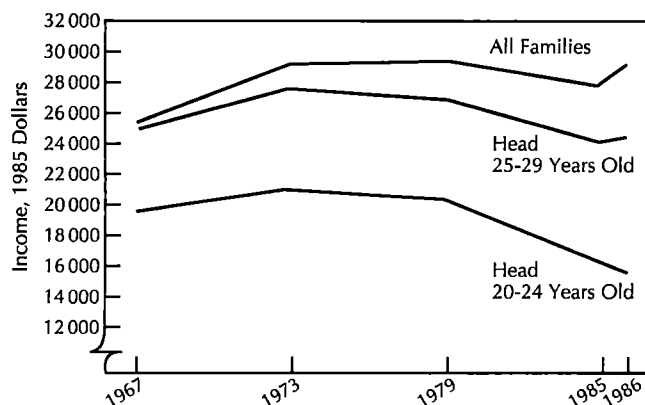


Fig 1.—Incomes in 1985 dollars of all families and those families with heads aged between 20 and 24 years and between 25 and 29 years for the period 1967 to 1986.

Table 1.—Trends in Real Median Incomes of Families, 1967-1986, by Age of Family Head (in 1985 Dollars)

Year	All Families	Age of Family Head, y	
		25-29	20-24
1967	25 560	25 132	19 654
1973	29 175	27 551	20 821
1979	29 028	26 676	20 025
1985	27 735	24 000	16 000
1986	28 898	24 400	15 107
% change			
1967-1973	+14.1	+9.6	+5.9
1973-1986	-1.0	-11.4	-27.4

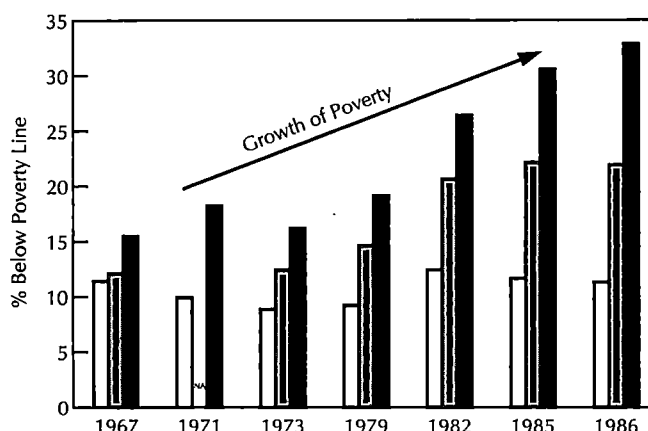


Fig 2.—Growth of poverty in all families (open bars) and families with heads aged less than 30 years (shaded bars) and less than 25 years (solid bars) for the years 1967, 1971, 1973, 1979, 1982, 1985, and 1986. NA indicates not available.

should become more involved at least with the health care of this group, and if they do, they will of necessity become involved as advocates for change in the socioeconomic and educational aspects of these young people's lives. Without such involvement, medical care by itself will be of only moderate benefit.

First, few other medical specialties are dealing with this age group, in part because of their lack of health insurance.

Table 2.—Primary Families With Income Below the Poverty Line, by Age of Family Head, 1967-1986 (in Percentages)*

Year	All Families	Age of Family Head, y	
		<30	<25
1967	11.4	12.1	15.3
1971	10.0	NA	18.0
1973	8.8	12.3	15.8
1979	9.1	14.5	19.1
1982	12.2	20.6	26.1
1985	11.4	21.8	30.2
1986	10.9	21.6	32.6

*NA indicates not available.

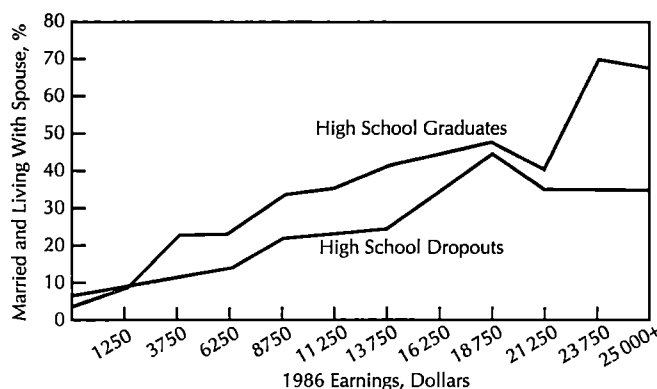


Fig 3.—Proportion of 20- to 24-year-old men who were married and living with their spouses by 1986 annual earnings and by educational subgroup (March 1987).

Among all young people, health coverage is poor, but blacks, Hispanics, and other minorities are even less likely to have health insurance than other American youth. In 1984, 21.4% of 16- to 24-year-olds nationwide (7.4 million young people) had no health insurance, compared with 13.3% of all the civilian population.

Second, the diseases young people have are similar to those of younger children rather than being the degenerative diseases of older people that constitute such a large part of internal medical practice. Pediatricians are likely to be very competent in dealing with these health problems.

Third, no other medical specialty really specializes in all of the many interrelated problems of this age group, such as substance abuse, sexually transmitted diseases, infections, and closely related social problems. True, these problems require skills in social pediatrics, but many pediatricians are well versed in these skills. Pediatricians have generally been more involved in social action than many medical specialists.

Fourth, the field of chronic illness in this age group, while small, is especially pertinent for pediatricians. Many children with chronic childhood illnesses, such as asthma, cystic fibrosis, hemophilia, and rheumatoid arthritis, now live into their twenties. If they have been under pediatric care earlier, it makes little sense to transfer their care to another specialty when they are 16 or 18 or 20 years old,

since their medical care is very similar to what it was when they were 10 years old.

Finally, we now recognize that considerable development, especially psychological, is still going on while young people are in their early twenties. Few young people take on permanently the major tasks of adulthood—family, permanent career, and citizen participation—in their early twenties. Most, especially middle-class children, try out a number of possibilities in their twenties before settling in. One of the problems of disadvantaged youth is the difficulty they have in getting second and third chances. Since understanding development is one of the pediatrician's main skills, it makes sense for us to add to our knowledge and skill to provide health care for a group of young people undergoing rapid social and emotional development in their late teens and early twenties.

WHAT CAN PEDIATRICIANS DO FOR THIS GROUP OF POOR AND UNDERSERVED CHILDREN?

At first glance, one can legitimately question whether pediatricians can do much for the forgotten half, since so many of their problems lie in the changed economic sphere. It is true that without change in job opportunities other services are going to be less than adequate. Pediatricians need to advocate promising programs in the job area, such as better vocational education programs, apprenticeship (school-job linkage) programs, educational reform that produces schools that encourage an individual's strengths and foster success, and enhanced job training partnership programs. Most of these require national initiatives and policy changes, and we can at best be supportive.

There are a number of initiatives at the local level that pediatricians can take to meet the needs of this group of poor and underserved youth. Closest to home would be to foster comprehensive service programs. Most such youth need a combination of social services, remedial education, and rehabilitation, together with medical care. Sometimes this can be organized in a group practice setting. More often the pediatrician will have to go where the young people are—the school, workplace, church, or community service center. The need for age-appropriate comprehensive services rather than any one of these services in isolation is very great. We can work toward that goal in every community.

Strengthening of families is another very important task. We often think that this age group is totally emancipated, but most still maintain contact with their parents; indeed, many remain in the parental home. Many of the young people interviewed by the W. T. Grant Foundation Commission expressed the wish to have more contact with parents and adults. Parent education programs, enhancement of parent participation in schools, involvement of parents in health programs, mentoring programs for youth, and efforts by parents, teachers, and employers to plan reasonable part-time work schedules can be done at a local level. Communities must tap the youthful energy and idealism of youth. Many youths volunteer their time to rebuild communities. Such volunteer programs have demonstrated useful ways to capture this energy of young people. For the poor, however, all of this activity cannot be voluntary. Such young people must be paid, or else

they will turn to activities, legal or illegal, that yield some income. Many of the successful "volunteer" corps programs provide incentives for further education by providing an amount (usually around \$5000) for each year completed toward further education. Many high school systems are now requiring a certain amount of community service as a requirement for graduation. Such service utilizes the idealism of the young, brings them in contact with adults, and gives them a true sense of value to society. One group in New York City provided an opportunity for young people to read to elderly people in nursing homes. Teachers have noticed that these young people, who could not sit still in school, became very patient and invested in their relationships with the old people. This also gave the young people a real sense of accomplishment. Every community can organize some youth activities such as these.

COMMENT

Young people in late adolescence and young adulthood, roughly 16 to 24 years of age, are a neglected group of children in our society. They are neglected by schools, health services, and employers. If they have not graduated from high school or do not go on to higher education, their future today in America is limited. They are the forgotten half. While most are energetic and ambitious, without adequate jobs to support a family, they are at increased risk of becoming single parents, engaging in substance abuse, contracting diseases, and exhibiting problem behaviors. Even those who go on to higher education often go through a period of testing alternatives in intimate social relations, jobs, and citizen roles.

A number of solutions are possible for the problems of this age group, but they require attention to programs that combine education reform, job opportunities, integrated comprehensive services, meaningful community roles, and contact with adults. Pediatricians have an important role as part of the team caring for youth, but they must also be willing to work with other disciplines in comprehensive programs and as advocates for this age group.

We may not be able to solve Jeff's problem by ourselves, but with more of the comprehensive community approaches I have outlined, we should be able to prevent many young people from reaching his state. Prevention has always been the pediatrician's main job. Now it requires social change as well as immunizations.

Some will ask, How can we convince the public of the need? People accuse me of being a congenital optimist, but I see more opportunity now than in the past 10 years. Businesses are concerned that there will not be enough skilled workers in the future. Schools are being reformed. Links between school and work are being developed. The task will not be easy, but pediatricians must add their prestige to these efforts, and join the growing chorus of those who are coming together in coalitions to make the lives of the forgotten half more healthy and effective. In so doing, they will improve the competitiveness of America in the future.

Reference

1. The William T. Grant Foundation Commission on Work, Family and Citizenship. *The Forgotten Half: Pathways to Success for America's Youth and Young Families*. Washington, DC: The William T. Grant Foundation; 1988.

A Regional Pediatric Approach to the Epidemic of Social Ills Within Our Cities

Waldo E. Nelson, MD

Twas midsummer 1990, I received a letter from Vince Fulginiti:

In May 1991, each of the AMA family of journals will devote all or most of their issues to articles that report individual and professional societies' ideas and suggestions for improving health care to the poor and underserved in this country. *AJDC* will focus on infants, children, adolescents, and young adults . . . who are not receiving it [health care] currently, or who are poorly served by our present system. . . . This would be an excellent opportunity . . . for you to [record] your concept of the academic health center/community relationships . . . [for the health care of] the underserved and unserved . . ."

Vince (my one-time student, now colleague, and from the beginning, my teacher) is correct in his implication that an overriding concern of mine is that the state of our national health care is not nearly as good as it could be. The most serious deficits are evident in the health care available for the poor and are, to a great extent, concentrated in our large metropolitan areas. The issue at hand for the medical community appears to be not only the search for ways to improve the quality of health care, but also for an adequate distribution of it and the means to pay for it. This is not a new concept. My own recognition of these inadequacies goes back to the mid 1920s.

No attempt will be made here to review the many aspects of this multifaceted subject. Rather, I venture to suggest an initiative for medical care of the underprivileged that may have some potential to be effective now, and even to provide some serendipitous dividends for the future.

I am convinced that more is likely to be gained at the local level within an area or region that functions as a natural medical service unit rather than by a limited national program. In recent years there have been several national programs designed to provide care for the socioeconomically deprived, especially within the inner cities. At best they were of limited value and were relatively expensive.

The medical unit in this concept is a regional area with complete primary, secondary, and tertiary medical services for its inhabitants. In general, they are not demarcated by state or other political boundaries, but have been determined by growth and developmental factors within and around urban centers and extend into the surrounding rural areas. Primary services are those available through physicians in private practice, in particular, pediatricians, internists, family practitioners, and pediatric

nurse practitioners, and through their respective counterparts in the community and tertiary hospitals.¹

The regional medical unit will contain a number of neighborhood hospitals (secondary), and at least one tertiary (usually associated with a medical school) hospital. In most large metropolitan areas there are usually two or more medical schools. Each hospital will naturally have its own coterie of practicing physicians who preferentially refer their patients who need specialized care. Hospitals that have attained particular competence in a certain highly specialized clinical field should expect preferential referrals to them from the primary physician whose principal affiliation is with another tertiary hospital and even from the clinical staffs of other academic hospitals. If such an objective policy were adhered to, it would represent a major step toward high-quality care in that regional medical unit.

For such a utopia to come into existence, not only goodwill but free and open communication among the physicians within that region will be required. Furthermore, it will necessitate elimination of competitive advertising by hospitals, health maintenance organizations, and individual physicians. To be sure, such activity is not only condoned by the federal government, it is even encouraged, and so far as I am aware, it is not objected to by AMA-related societies. It can only be destructive in some of its current forms. Information about services available in the various hospitals, health maintenance organizations, and other medical service units is essential for the primary physician and for the lay public, but inflammatory advertising that is unjustly self-serving should be abolished.

What I speak for is simply a realistic bonding between practicing physicians and those in academia in accepting responsibility for the quality of medical care within and "beyond their office walls," ie, within their respective region. I tend to designate those physicians who are primarily in private practice as "The Town" and those who are solely or mainly in academic activities as "The Gown."² It is the close integration of these physicians within a given region that is so essential in determining the ways and means to meet the medical needs of the underserved.

Those of us in the medical field should sense our personal responsibility not only for the quality of medical care in our respective roles, but also for the quality of health care within our community.¹ For example, activities centered more or less in the Philadelphia Pediatric Society, concerning the epidemic proportions of socioeconomic health problems among children and youth in our area, led to the formation of a task force under the leadership of William N. Mebane, MD, Director of the Family Practice

Accepted for publication December 27, 1990.

From the Department of Pediatrics, Temple University School of Medicine at St Christopher's Hospital for Children, Philadelphia, Pa.
Reprinted from *AJDC* (1991;145:505-506).

Residency Program at the Chestnut Hill (Pa) Hospital. It was thought that this group could bring together those in the Gown sector (medical school hospitals) who were currently involved in pediatric activities in public schools and in shelters for the homeless with members of the Town sector who might be interested in sharing in this work. Both resident physicians and medical students are becoming involved in these activities.

Recently, the Philadelphia Pediatric Society circulated a questionnaire among its membership to identify additional Town and Gown physicians who might be interested in joining in this work. To date, there have been some 120 favorable replies. It will be of considerable interest to see what eventually evolves from these activities.

One of the recent encouraging outcomes has been the "spontaneous creation" by the resident physicians from one of the hospitals of a volunteer group of their own to provide medical services at an evening clinic in one of the shelters, an activity that does not interfere with their hospital program. I visited an evening clinic recently. It was a busy sight that included mothers, some fathers, infants and children, doctors, a nurse, and two social workers. It was truly a rewarding experience. Had one not known, one would not have surmised the variety of medical problems that were represented.

A necessary step will be the funding of this local effort. At the moment it is expected that the salaried members of the pediatric departments will continue receiving their current support, and it is hoped that, at least for the foreseeable future, the private physicians from the Town will "gain most," if they serve on a volunteer basis. In days past, when the Town was so essential in sharing in the clinical teaching load of pediatric departments, most of them served without pay. To this day, I have not found more loyal members of the two departments I was privileged to serve in my active days than those whose participation was on a volunteer basis. However, there will be a need for additional money. More can be expected from a number of sources—local governments, foundations, corporations, labor unions, and private individuals.

Separate from our considerations in support of a regional approach to the solution of community health problems is the necessity to devise a new national health insurance program that will include all persons on as nearly an equitable basis as possible. The time is past when we should expect anything less. It is estimated that 30 to 40 million of our children who are mainly in the lowest socioeconomic grouping are either uninsured or underinsured. To include them in a revised program will likely necessitate reduction in the payments to some of those in the older age group. There will be opposition, and the lobby for this group is not impotent. I am in this age group, and I am comfortable in saying that there are a number of us who could do with less in "third party payments" for care in our terminal years even if it is not the most pleasant of possibilities. The uninsured children must also be served. They have years of growth and development and of contribution to mankind ahead of them.

A national commission made up of competent, objective, and socially minded citizens should be formulated to develop such a program, and soon!

So, my concept of a common goal for those who are

committed to the search for excellence in the provision of health care is simply that in each successive period, the medical care for each person, in health and in disease, will come to approximate the potentials of the moment; that such high-quality health care will be available to all those who want and can profit from it; that the lay person will recognize that he or she must come to appreciate "good care" and be responsible for cooperating with it and for maintaining a healthy pattern of living; and that the legal profession will share in attempts to develop a truly objective and ethical climate in the region.

Within our own time, what can be done by the medical profession and, especially, by the pediatric segment of it, to develop a workable plan to meet the above-mentioned goals?

1. Town and Gown will join together in determination to see "that their (invisible) walls shall come tumbling down," a true bonding.² Their constant priority will be to assume joint responsibility for the general health of the community in conjunction with their public health departments, including those of the school systems.

2. Town will have access to and make use of Gown's personnel and facilities, when indicated, in the treatment of their acutely ill patients as well as in the study and treatment of chronically ill ones, often on a continuing basis.

3. Gown will tap the Town segment for bolstering its teaching programs in inpatient and outpatient divisions. Some of our best teachers are among the Town personnel and some of our best clinicians among the Gown segment.¹

4. Town and Gown will participate in efforts to devise a health insurance program available to all citizens, and everyone, including professionals and laity, will cooperate in efforts to make its operation fiscally sound.

Important as the medical aspects are, the social, educational, and economic deficits present as great or greater challenges in planning a total community program. These deficits are manifested by the lack of personal motivation among school-age children, the number of school dropouts, the failure to take advantage of work opportunities, teenage pregnancies, and other deviations that often result in anger against society, not only leading to lives of crime but to loss of potentially productive careers.

The issue at hand is patently a moral one that will not go away except by appropriate mass determination and action. It is my contention that the desired goal of giving each child the opportunities that could lead to readiness for responsible adulthood is most likely to be attained by local efforts within multiple communities.

Those of us in the health field constitute one channel of support. Within the confines of our communities, we can, in conjunction with other disciplines, the family, education, business, law and, not the least, the church, find ways to reactivate the spirit and determination to make this country truly a land of equality in freedom and in opportunity for the child to find a fulfilling role in society.

References

1. Nelson WE. Regionalization of pediatric activities: a challenge for Town and Gown. 30th Anniversary, The Ambulatory Pediatric Association - Its History and The Collection of the George Armstrong Lectureships (1960-1990).
2. Nelson WE. And the walls come tumbling down: a tribute to Lee Forrest Hill. *J Pediatr.* 1976;89:1-2.

The Caring Program for Children

The Michigan Experience

Marianne Udow, MHSA; Vernon K. Smith, PhD; Margaret H. Mason, MHSA

● Public-private partnerships may offer the best opportunity in the near-term for addressing the problem of the uninsured. In Michigan, a broad spectrum of groups has studied the issue of the uninsured and, despite the diversity of the groups, arrived at a consensus that providing coverage to uninsured children is an urgent priority. The Caring Program for Children, a private program initiated by Blue Cross of Western Pennsylvania to provide primary and preventive health care coverage to children in low-income, uninsured families, gained support from the Michigan legislature and advocacy and provider groups as a means to address the problem. Blue Cross Blue Shield of Michigan and the Michigan Department of Social Services joined to expand the Caring Program for Children from a private program to a public-private venture funded by federal and state funds and private donations that has the potential to provide coverage to more than 12 000 children. The Michigan experience may be instructive to other states attempting to devise immediate local solutions to the problem of the uninsured.

Health care financing and delivery mechanisms used in other industrialized nations have been suggested by many as models for reform of the American health care system. Given the pluralistic nature of American politics, however, it is unlikely that approaches used by other countries can be successfully duplicated in this country. At least in the near term, reforms that build on the current system rather than necessitating radical restructuring of existing mechanisms are most likely to garner sufficient support to be implemented. We describe one approach to building on the current financing and delivery mechanisms to address issues of access to care. Implications for broader applicability are also considered.

The Caring Program for Children (CPC) is a well-established private program offering health benefits to uninsured children who meet eligibility criteria. The program was initiated by Blue Cross of Western Pennsylvania and implemented in 11 additional Blue Cross and Blue Shield plans throughout the country. While the programs have provided health benefit coverage to some children who are not eligible for other private or public programs and whose

families cannot afford private insurance, as a private effort the programs have had relatively modest impacts on the problem of uninsured children. In Michigan, the Department of Social Services (DSS) and Blue Cross and Blue Shield of Michigan (BCBSM) have worked together to expand the CPC into a public-private partnership plan. This effort will be a laboratory to test the effectiveness of combining federal, state, and private funding to offer health benefits through a private delivery and administrative mechanism.

BACKGROUND

Across the United States over the last half decade, key state and local policymakers have become involved in efforts to identify the number of uninsured Americans and to devise local strategies to address the problem. Some states have initiated programs ranging from universal access models and mandated employer-based health coverage to initiatives that target specific population groups.

There is no "silver bullet" approach toward which policymakers automatically migrate as each state grapples with the need to strike a balance between cost and coverage. Common to all the states' efforts, however, is that diverse groups and coalitions have developed consensus on the urgency of the local situation and that the solutions reflect the unique circumstances and conditions each locality. The recent Michigan experience illustrates how coalitions can develop to create a policy environment conducive to implementation of programs that address health care for the uninsured.

In the middle to late 1980s, the increasing priority given to health care of the uninsured in Michigan was reflected in the creation of task forces, commissions, and work groups by provider, advocate, and health policy organizations. In Michigan, this included The Greater Detroit Area Health Council, the Michigan Hospital Association, the Michigan State Medical Society, the Michigan Protection and Advocacy Service, and the Michigan League for Human Services. Remarkably, given the diversity of the groups examining the issue, a sense of urgency about the creation of programs to provide health care for children was common among all groups. The findings that one third, or about 300 000, of the uninsured in Michigan are children—most of them in families of the "working poor"—and that uninsured children in need of medical care do face severe obstacles to obtaining care, generated

Accepted for publication February 5, 1991.

From Blue Cross and Blue Shield of Michigan, Detroit (Mss Udow and Mason) and the Michigan Department of Social Services, Lansing (Dr Smith).

Reprinted from *AJDC* (1991;145:579-580).

consensus that any strategy should include as its first priority a focus on children. All who studied this issue concluded that neither private nor public approaches alone will solve this problem, but that a combination of public and private approaches will be necessary.

For example, based on the findings of the Governor's Task Force on Access to Health Care, a broadly representative, 40-member body, "Healthy Start" was proposed as an expansion of Medicaid to provide health care coverage to children up to age 18 years in families with incomes of up to 200% of the federal poverty level. At the same time, BCBSM announced plans to implement the CPC, to be financed by private donations. The DSS and BCBSM began discussing ways to work together to ensure that the programs would be complementary.

Meanwhile, two legislative committees were examining the issue of the uninsured. The House Republican Task Force on Affordable Health Care for the Uninsured included in its final report,¹ issued in July 1990, eight recommendations largely focused on making health insurance more affordable to small-business owners. Notably, the primary recommendation was that legislation should be enacted to allow BCBSM to implement the CPC. The House Democratic Commission on Families identified health care as one of the key issues affecting the strength of families and urged in its September 1990 report² that priority be given to the adoption of statutory changes necessary to implement the CPC.

Owing to other budget priorities, Healthy Start was not enacted by the 1990 state legislature. The DSS and BCBSM then joined forces and secured a 3-year, \$6.6 million matching grant from the Health Care Financing Administration to supplement private and state funds for the CPC. Underlying the grant proposal was the premise that through public-private partnerships programs such as the CPC are greatly enhanced—use of public funds allows the Michigan CPC to provide coverage to more children and broaden benefit coverage, while use of private sector delivery mechanisms offers access to more providers. The federal grant allowed the CPC to expand coverage to include prescription drugs, and the program has the potential to provide coverage to more than 12 000 children.

PROGRAM DESIGN

The CPC is designed to provide the highest priority services to the population group with the greatest need for health care services.

Administrative Structure

Blue Cross and Blue Shield of Michigan provides free administrative services, and the DSS administers the funds and assists with outreach and coordination with government programs. To ensure broad community involvement in the program, an advisory committee composed of 30 representatives from business, labor, religious organizations, the health care providers, parents, and state government provides fund-raising, outreach support, and general oversight of the CPC.

Target Population

The CPC provides primary health care coverage to children aged 18 years and younger whose household incomes are at or below 185% of the federal poverty level and who are not eligible for Medicaid or other sponsored health coverage. Under the terms of the Health Care Financing Administration grant, priority for coverage is

given to children of employed former welfare recipients. All eligible children in a family are required to enroll simultaneously to provide a mixed risk pool of sick and well children. Enrollees are recertified annually.

Benefits

Benefits under the CPC are aimed at providing the basic preventive and primary health care coverage children need to avoid chronic illness and permanent disability. Because children are hospitalized less often than adults, and to provide coverage for as many children as possible, inpatient care is not covered under the program. Benefits of CPC include preventive care (including well-child care and immunizations), office visits to physicians, outpatient and office diagnostic and therapeutic laboratory and radiology services, outpatient and office surgery and anesthesia, outpatient and office accident medical emergency care, outpatient substance abuse services, and prescription drugs. These are covered in full, with no deductibles or copayments.

Provider Arrangements

All BCBSM participating physicians and BCBSM Participating Provider Organization pharmacies are eligible for reimbursement through the CPC. A number of pediatricians, family practitioners, and other providers are participating with BCBSM especially for the CPC.

Funding

The CPC is supported by private funds raised by BCBSM and state funds, which are matched by a special grant from the federal government. Private contributions to the program are tax deductible.

IMPLICATIONS

While the Michigan CPC is only a relatively small step toward providing health benefit coverage to the uninsured, it can have profound lessons for a more comprehensive solution. First, the program is easily duplicated in other states. Second, existing structures necessary to implement the program are for the most part already in place so that implementation can occur relatively quickly. Finally, the program builds widespread coalition support. Indeed, the strength of this effort has been the broad base of interest from providers and consumers of health care as well as from private health benefit carriers, financiers, regulators, and legislators. The depth of this support, including the willingness to commit to this effort on a long-term basis, will be key to the general applicability of this kind of an approach.

In the long term, more radical restructuring of our mechanisms to finance health care may be necessary to ensure access to health care for all. It does not appear, however, that this country is yet ready for such a major change in health policy. In that context, much can be learned from the several efforts under way across the country that use public-private partnerships to deliver health care services to segments of the uninsured populations. Programs that can be implemented now and that maximize funding and administrative capabilities from all sources, such as the Michigan CPC, are likely to have much more immediate impacts on delivering needed care to the uninsured.

References

1. House Republican Policy Committee. *Recommendations of the House Republican Task Force on Affordable Health Care for the Uninsured*. July 1990.
2. The House Majority Commission on Families. *Interim Report*. September 1989.

Health Care for Pregnant Women and Young Children

Richard E. Behrman, MD, Carol S. Larson, JD

Inadequacy of family resources to purchase health care is the major reason poor, near-poor, and underserved children and youth do not obtain needed preventive, acute, and chronic health care services.¹ Other factors also can significantly limit access to health service, such as distance to facilities, availability of health providers, barriers in the organization and function of the health care system, and the attitudes and behaviors of patients.^{2,3} However, inadequacy of resources to purchase medical care is the central problem. The child population whose families are unable to afford medical insurance coverage now includes 27 to 28 million infants, children, and youth who are uninsured, partially insured, or enrolled in Medicaid. The number of pregnant women who cannot afford care must also be considered when addressing the health care needs of children. Twenty-seven percent of women between ages 20 and 24 years are without private health insurance, as are 22% of teenage girls and women between ages 15 and 19 years.³

It is time for this country to meet the health care needs of its pregnant women and children. A strengthened partnership between the private and public sectors can meet these needs through a uniform, comprehensive, and federally initiated plan. As the debate proceeds over major restructuring of the health care system, comparatively minor changes to the current system can be made today to care for our youngest and most vulnerable population. These changes could apply immediately to pregnant women and all young children or could be phased in by birth cohorts. In the long run, the costs of providing this health care will be low compared with the health and social costs that follow in adulthood from lack of health care during early childhood.

BACKGROUND

The opportunity for many of our nation's children to fulfill their potentials as productive citizens is being severely compromised even before they reach school age. A child's capacity to thrive in later years is limited by health and developmental problems ignored in early life during the especially critical period from conception through age 5 years. This is also the period of life for which the evidence of the beneficial effects of appropriate health and developmental interventions is strongest. At any time, this

most vulnerable population totals about 26 million individuals, consisting of approximately 22 million children aged 5 years or younger and 4 million pregnant women. An estimated 23% of this population are below the poverty line⁴ and particularly likely to fall into a health care gap, ie, are likely not to receive important health and related services between conception and delivery (eg, prenatal care and treatment of substance abuse) and between birth and entering public programs (eg, Head Start, child care, or school, which can provide such services as immunization and screening for disabilities).^{5,6}

The families of children without disabilities or illness can often bridge any gaps financially to see that their children receive the care they need. Many families cannot afford the health services their children require, however, and are ineligible for Medicaid and other programs.³ Indeed, given the widely varying eligibility standards of Medicaid among the states, whether poor children are covered has more to do with where they live than what they need. Even families with children covered either by Medicaid or private insurance can experience tragic gaps in health care. Both public and private benefit packages are limited in coverage, and an increasing number of barriers make it more difficult to maintain coverage and obtain access to services.

Myriad proposals have emerged in recent years to reform the health system for people of all ages. Some build on the current structure; others urge a complete overhaul. They use, in different combinations, diverse strategies such as a single-payer system, managed care, and employer-mandated coverage.

The debate over health care provision in this country is not likely to be resolved quickly. Indeed, a new health care system may most likely evolve from lessons learned from relatively incremental change. If so, that change should start with pregnant women and young children. As the recent congressional expansions of Medicaid attest, there is consensus that the health needs of this population should receive high priority.

The American Academy of Pediatrics (AAP) has proposed a plan that would build on the current system to better meet the health care needs of pregnant women and children.⁷ The following proposal contains many of the components of that plan and a few additional provisions: to allow a phase-in that targets young children first, to establish health providers in underserved areas, to establish a national insurance commission, to create a public/private council for citizen participation in the monitoring of health care provision, and to provide ongoing outcome measures of effectiveness.

Accepted for publication November 19, 1990.

From the Center for the Future of Children, the David and Lucile Packard Foundation, Los Altos, California.

Reprinted from *AJDC* (1991;145:572-574)

PROPOSAL

We propose a targeted national health care program that could be phased in incrementally over 6 years by enrolling all pregnant women and newborns each year by birth cohorts. In addition to requiring lower initial outlays, this approach would also provide an opportunity to implement a new public/private health insurance partnership program without significantly disrupting the existing complex of health care providers, payers, and employers. Furthermore, the program could be implemented on a controlled, small scale that would make it possible to troubleshoot unforeseen problems during the phase-in. This approach also takes a first step in addressing the larger health insurance problem in this country without incurring the enormous financial obligation inherent in the more global solutions that have been proposed.

The major points in this proposal are as follows:

1. All pregnant women and young children would be covered by private health insurance (indemnity or managed care) purchased through either public or private funds and consisting of a basic benefit package (including preventive health and screening programs, ambulatory and hospital care, and related social services). The health benefit package would be developed with reference to the AAP benefit list and current provisions of the Medicaid and Early Periodic Screening, Diagnosis, and Treatment program.⁷

2. All private health insurance policies and contracts would be required to include this benefit package, and a special payroll tax would be levied on employers who did not offer insurance. For children whose parents cannot afford a policy and do not receive coverage from an employer, coverage would be purchased and premiums paid through a combination of income-graduated, family payments; public funds financed by the payroll tax on employers and employees; and allocations from federal and state budgets. Payments from the latter sources might be indexed to the proportion of children under age 6 years in the state. Premiums for insurance purchased by the public fund would be negotiated with consideration of the cost of purchasing the health benefits in the marketplace and of variations in health care costs.

3. Many of the health and related services that would be required under this proposed children's health plan are currently provided for some children through a variety of federal and state programs, and these program funds would be transferred and consolidated to fund this plan. This would likely include transfers from federal programs such as Medicaid; Title V of the Social Security Act; the Supplemental Food Program for Women, Infants, and Children; and immunization grants.

4. The existing provider health provision systems would be used. The Public Health Service would be expanded and authorized to provide care in areas where numbers of health professionals are inadequate. This public program would include a voluntary program by private physicians, perhaps with subsidized professional insurance coverage or other provisions to attract these health providers. Recruitment of young physicians to the Public Health Service might also be facilitated by an educational loan forgiveness program in exchange for service.

5. Reimbursements to providers would be based on diagnosis related groups and a professional relative value system schedule developed for this population.

6. A Federal Child Health Insurance Commission would be created to establish standards and the basic benefit package, to coordinate states and their insurance commissions, and to oversee the insurance broker function and negotiation and payment of premiums. State agencies would be identified as the agents for disbursement of public funds.

7. A Council for Children's Health and Related Social Services would be established with broad representation from private and public sectors, including appropriate professionals. This council would be a national umbrella organization to advise and monitor the health delivery system. The council would have state and local units, creating a federation of local volunteer and public agencies throughout the country to assist in monitoring and coordinating outreach and volunteer efforts in health care.

The national council would be responsible for making recommendations about the basic benefit package to the federal and state insurance commissions and for monitoring the implementation of these recommendations. Its recommendations would also inform the premium negotiations.

The national council, in cooperation with the Department of Health and Human Services and state departments of health and education, would also annually review and report on the status of this insured population based on available selected health outcome measures, such as the proportion of women receiving late or no prenatal care, infant mortality, immunization rates, hospital use by children, and primary school absenteeism and performance.^{8,9} This would be an important element in evaluating effectiveness of the services provided under this program and in making recommendations for change in benefits, payments, or other services.

The state and local affiliates of the council would assist in oversight and coordination of services, community innovation, and problem solving. "Lead organizations" would be selected at the state and local levels from among the private and public organizations concerned with child health and welfare. These lead organizations would be responsible for working with families, providers, and various local voluntary and public agencies to ensure that each pregnant woman and young child obtains needed high-quality services. These groups would also regularly report to the council on provider and insurance carrier performance. These reports would be incorporated into the council's recommendations to the insurance commission.

COSTS AND ADMINISTRATION

The AAP estimates that its plan to insure pregnant women and children aged 18 years and younger would increase the \$98.8 billion currently spent on this population annually to \$111.4 billion.⁷ This more modest plan focusing on the youngest children would cost significantly less. Because of its incremental approach and the relatively small population covered, it would facilitate the field-testing of the new administrative structures and the private-public partnership in program implementation. Thus, unanticipated problems could be better dealt with

than might otherwise be possible. It would cause minimal disruption in the insurance industry and various provider systems.

CONCLUSION

Initiating change in the current system would be less costly than maintaining the status quo. Failing to provide preventive health and early treatment services results in larger direct and indirect costs to society than providing services early in life. In addition, the costs of such a program are probably lower than one might assume because most members of this population are healthy. The costs of providing health services for all children and pregnant women account for a relatively small portion of total national health care expenditures.

To address the health needs of this overlooked group in a cost-efficient way, we need to elicit significant efforts from local private and public sectors and from the federal government. All share in the potential benefits when these children succeed in becoming productive citizens.

Failure to address the health needs of today's children is having insidious consequences for our society, causing uncertainty and suffering for our families and compromising our future productivity and competitiveness.^{6,9} Our future will be mortgaged to a much greater extent by this negligence than by failure to reduce the federal budget deficit. The proposed program would start to address this

problem by focusing on pregnant women and young children, those whose health needs are not only great, but also will have consequences for the well-being of this country for decades to come.

References

1. Oberg CN. Medically uninsured children in the United States: a challenge to public policy. *Pediatrics*. 1990;85:824-833.
2. Children's Defense Fund. *The Health of America's Children: Maternal and Child Health Data Book*. Washington, DC: Children's Defense Fund; 1989.
3. Erdman K, Wolfe SM. *Poor Health Care for Poor Americans: A Ranking of State Medicaid Programs*. Washington, DC: Public Citizen Health Research Group; 1988.
4. National Center for Children in Poverty. *Five Million Children: A Statistical Profile of Our Poorest Young Citizens*. New York, NY: Columbia University; 1990.
5. National Commission on Children. *Reference Book*. Washington, DC: National Commission on Children; 1989.
6. Wise PH, Meyers A. Poverty and child health. *Pediatr Clin North Am*. 1988;35:1169-1186.
7. Harvey B. A proposal to provide health insurance to all children and all pregnant women. *N Engl J Med*. 1990;323:1216-1220.
8. US Office of Technology Assessment. *Healthy Children: Investing in the Future*. Washington, DC: US Government Printing Office; 1988.
9. US Public Health Service. *Healthy People 2000*. Washington, DC: US Dept of Health and Human Services; 1990.

Improving Health Care for Underserved Infants, Children, and Adolescents

The Robert Wood Johnson Foundation's Experience

Michael P. Beachler

Improving the health care of this nation's infants, children, and adolescents has been a priority of The Robert Wood Johnson Foundation since its inception as a national philanthropy in 1972. The foundation has awarded grants totaling almost \$243 million, approximately 22% of the foundation's overall grant-making to date, to programs whose aim is to improve the health of infants, children, and adolescents.

The foundation has used three major strategies in its child health efforts: service demonstrations to develop and test new models of care, research to improve the knowledge base and assess the efficacy of its service demonstrations, and training to better prepare health care providers to address common child health problems. Given the foundation's mission to improve the health care system, and particularly its long-standing interest in improving access to care, more than two thirds of its child health funding has supported service projects targeting underserved children.

The foundation's primary objective in its early years (1972 to 1980) was to increase access to personal health services. In light of the nation's high infant mortality rate, which accounted for 70% of all deaths among children under age 15 years, many of the foundation's early child health efforts emphasized improving access to perinatal care.

In the early 1980s, the foundation announced a broader agenda, one that went beyond improving access to include support of programs to help people maintain or regain maximum attainable function and to make health care arrangements more effective and affordable.

The development of its most recent child health efforts has been influenced by major changes in the organization and financing of child health services and by the changing nature of child health problems.

A CHANGING HEALTH CARE ENVIRONMENT FOR CHILDREN

With the foundation's earliest child health efforts, it was presumed that once a program was successfully implemented the health system would have sufficient resources to sustain it beyond the grant period and to replicate it more broadly. This expectation may have been appropriate in the 1970s when federal financing for child health

programs was increasing, but by the early 1980s, an era of fiscal retrenchment, it was no longer realistic.

In the late 1970s, the number of children without health insurance was increasing, yet in the early 1980s public financing for child health services was cut back. From 1977 to 1985, the proportion of children younger than age 18 years without public or private health insurance increased from 17.6% to 23.4%.^{1,2} Today, more than one third of the uninsured are children.

Economic changes have had a major influence on the decrease in private insurance coverage for children. For some, parents' manufacturing jobs, and accompanying health insurance, have been lost, to be replaced with service-sector jobs less likely to provide health insurance benefits. The growth of single-parent households and a reduction in the share of group health premiums paid by employers have also contributed to the decrease in private coverage.³ Regarding public insurance, changes in Medicaid eligibility requirements reduced the proportion of low-income Americans covered from 63% in 1975 to 46% in 1983.⁴ From 1978 to 1984, Medicaid expenditures (measured in constant dollars) declined 13%, and federal funding for three important sources of primary health care for poor women and children—maternal and child health services, community health centers, and health centers for migrants—declined 32%.⁵

During this period, a shift in responsibility for child health policy from the federal to the state level occurred under the Reagan administration's "New Federalism" policy. States now had primary administrative responsibility for several key child health programs, such as the Maternal and Child Health; Prevention; and Alcohol, Drug Abuse, and Mental Health block grant programs. Accompanying federal funding cuts pressured state governments to increase their support of these services. Federal Medicaid policy also started to allow states greater flexibility concerning the range of child health services they could cover and greater discretion as to who was eligible for services. In the last 5 years, Congress passed legislation allowing states to increase covered services and to provide Medicaid coverage to mothers and children without having to increase welfare payments.

While these policy changes unfolded, the changing health problems of America's children presented significant new challenges. The premature infant of the early 1970s may have required admission to a state-of-the-art neonatal intensive care unit; by contrast, today's cocaine-addicted premature infant—in addition to neonatal intensive care—may require detoxification, foster care, and

Accepted for publication December 21, 1990.

From The Robert Wood Johnson Foundation, Princeton, NJ.

The views expressed in this article are those of the author, and no official endorsement by The Robert Wood Johnson Foundation is intended or should be inferred.

Reprinted from *AJDC* (1991;145:565-568).

many other health and social services involving many agencies, institutions, and funding sources. The mother also requires drug treatment and help coping with an at-risk newborn. In a child health system that is fragmented and funded through a bewildering array of separate categorical programs at the federal, state, and local levels, ensuring that a child with multiple health problems obtains needed services becomes extremely difficult.

These changes in public policy, children's needs, and what are considered health-related problems have resulted in a broader focus for the foundation's programs in this area, which now concentrate on helping the child health system be more responsive to children's health needs.

SELECTED CHILD HEALTH EFFORTS

This evolution in the foundation's programs can be illustrated through brief descriptions of several of its major maternal and infant care programs. The first major initiative in this area was the Perinatal Program, an eight-site demonstration program, implemented between 1975 and 1980, designed to demonstrate the feasibility of regionalized perinatal services and to measure their impact on infant mortality and morbidity. Through this program, major medical centers worked with community hospitals to establish common perinatal risk assessment systems, maternal and neonatal transport systems, consultation and outreach education programs, and management information systems to track care. An independent evaluation of the program found that neonatal mortality rates declined by an average of 20% at the eight sites. At the same time, there was no increase in the number or proportion of infants with serious physical or developmental handicaps at age 1 year.⁶ The concept of regionalizing perinatal care has taken hold strongly in most parts of the country, yet, key elements of this system—common records, training, and outreach—are not widely adopted. In fact, even former grantees have had difficulty sustaining these components of a regional system.⁷

The Rural Infant Care Program (1980 to 1985) extended this regionalized approach to isolated rural areas that had extremely high infant mortality rates. This effort supplemented the federal government's Improved Perinatal Outcomes and Improved Child Health programs. The Rural Infant Care Program mobilized 10 medical schools to provide technical support to providers in outlying communities. It also included aggressive efforts by nurses and lay outreach workers to encourage high-risk mothers to obtain prenatal care early in their pregnancies. The evaluators of the program found significantly greater reductions in infant mortality in most of the program sites compared with other rural counties in their states without this program. They also found that a significantly larger proportion of low-birth-weight deliveries in the area served were taking place in medical centers.⁸ Almost all of the sites have maintained some identifiable elements of the program, although the project's interventions have not been widely implemented in other sites in these states.

By the mid-1980s, the foundation's focus had shifted. The intent of *Healthy Futures: A Program to Improve Maternal and Infant Care in the South* (1988 to 1992) is not to demonstrate the effectiveness of new models of care, but to encourage states and communities to incorporate what has already been learned from past demonstrations

into their permanent systems of care. In contrast to the two earlier programs, in which the grantees were academic medical centers, the grantees in the *Healthy Futures* program are the state health departments in five southern states and Puerto Rico. (Another six sites are funded through the federal government's *Healthy Generations* Program, which resembles and has worked closely with the *Healthy Futures* program.) This \$7.2-million program emphasizes promotion of regionalized systems and prenatal care outreach, improved coordination between the state's maternal and child health and Medicaid agencies, better financing for the state's perinatal care service system, and increased cooperation between public officials and private providers.

The grantees in this program have made considerable progress during the first 2 years of foundation support. For example, several states have actively promoted the adoption of uniform prenatal risk assessment tools and have improved financing (eg, expanded Medicaid eligibility, reimbursement, and perinatal service coverage).

Another example of a program developed with this broader focus is the Mental Health Services Program for Youth (1989 to 1994). Here, too, the grantees are state agencies. In this eight-site, \$20.4-million program, the foundation seeks to demonstrate that through a collaborative effort between states and local communities, services for children and youth with serious mental illnesses can be organized and delivered far more effectively. Mental health, child welfare, juvenile justice, and special education agencies at the community and state levels are responsible for improving the financing and coordination of services. They also are charged with developing a continuum of mental health and supportive services to maintain seriously mentally ill children in the most appropriate settings. During the 1-year development phase of the program, each of the sites made statewide financing changes that will increase the availability of home- and community-based services.

The importance of multiple agencies and community leaders in making the child health system more responsive is also illustrated by the School-Based Adolescent Health Care Program (1987 to 1993). This 18-site, \$14.5 million program is a collaborative effort involving schools, health care providers (such as hospitals or community health centers), and the community (through a formal community advisory committee). The program provides start-up support for school-based health centers that offer a comprehensive range of services in public secondary schools. The partnership between the schools and the community health providers has helped the sites secure third-party reimbursement of clinical services. In the 1989 to 1990 school year, reports Julia Lear, PhD, program codirector, more than 15 200 students received health services in the 23 schools involved, and more than 58 000 patient visits were made (oral communication, November 1990).

The foundation's most recent multi-site child health effort is a 3-year pilot test of the feasibility of restructuring publicly funded health services for children with a special emphasis on how these services are financed and delivered. It is intended to help communities simplify the complex web of categorical programs that fund services for

children with many health needs and to make these services more accessible. The hoped-for result is a system more responsive to the needs of the individual child.

SINGLE-SITE PROJECTS

In addition to these demonstration programs, the foundation also supports many single-site projects funded in response to unsolicited proposals. Some of these projects also are aimed at improving children's health by making the health and social service systems more responsive.

Harlem Hospital, New York, NY, for example, has developed an injury prevention program (1988 to 1992) that mobilizes coalitions of parents and community leaders to work with representatives from the city departments of education, parks and recreation, and transportation. During the last 2 years, substantial improvements have been made in the maintenance and supervision of equipment at 28 playgrounds, and a recent hospital survey indicates that window-guard use in apartments has increased from 50% to 80% during the last few years. The hospital's childhood injury-related admissions declined by 14% from 1988 to 1989—the first recorded reduction since 1975. During the next 2 years, the injury prevention program will continue to expand the playground and window safety projects and will develop programs targeted at adolescents.

In another urban project targeting underserved children, Montefiore Medical Center, New York, NY, has developed a lead poisoning prevention and treatment program (1988 to 1992) in The Bronx that combines new services and creative financing and involves city and state social service, health, and housing agencies. The project includes community-based mobile screening and a full range of treatment. Two new services—outpatient chelation and transitional housing—will complement Montefiore's existing inpatient chelation, nutritional counseling, and after-care services. The project has already secured financing for some transitional housing from city and state housing agencies and will work with housing and Medicaid agencies to increase this capacity and secure permanent financing for the mobile screening and outpatient chelation services.

In a rural project (1988 to 1990) funded by The Robert Wood Johnson Foundation, the Freedom from Hunger Foundation is working with the Mississippi Cooperative Extension Service and the state health department to reduce nutrition-related health problems among children in the Mississippi Delta. The project is designed to integrate the nutrition education efforts of the Extension Service-administered Expanded Food and Nutrition Service Program and the state-administered Supplemental Food Program for Women, Infants, and Children (WIC). Program coordinators are training Cooperative Extension Service staff in six counties and revising policies and procedures to facilitate better coordination of the two agencies' efforts.

CHILD HEALTH RESEARCH EFFORTS

The Robert Wood Johnson Foundation's child health demonstration programs have raised many important research questions. For example, the success of the regional Perinatal Program in improving the survival of low-birth-weight infants raised the critical question of what, if anything, can be done to improve long-term health and developmental outcomes of low-birth-weight infants. In

response, the foundation designed the Infant Health and Development Program (1983 to 1990), the largest randomized clinical trial of intensive early childhood interventions for low-birth-weight infants. The study principally was underwritten by the foundation with additional support from the federal government, The Pew Charitable Trusts, and Stanford (Calif) University's Center for the Study of Families, Children, and Youth. Eight cities were involved in the program: Boston, Mass; Dallas, Tex; Little Rock, Ark; Miami, Fla; New Haven, Conn; New York, NY; Philadelphia, Pa; and Seattle, Wash. The 985 children in the study sample were randomly assigned to one of two groups: children in the intervention group received home visits and were enrolled in special child development centers, with support groups for parents; children in the intervention and follow-up groups received high-quality pediatric follow-up care. The study found that children in the intervention group had significantly higher mean IQ scores and fewer maternally reported behavior problems than children in the control group. The study also provided conclusive evidence that high-quality group day care can be both safe and beneficial to low-birth-weight infants, despite their increased vulnerability to illness and their special developmental needs.⁹

Another foundation-supported child health research effort (1979 to 1983), conducted by the University of Rochester (NY) School of Medicine, assessed the effectiveness of a nurse home-visitor program for pregnant women and their infants in rural Chemung County, New York. Additional support for this project came from the W. T. Grant and Ford Foundations and the federal government. The study found that children whose families received home visits tended to have better language and fine motor skills, less use of emergency room and hospital services, and lower rates of child abuse than did children in families that did not receive these services. Home-visited mothers had fewer additional pregnancies and therapeutic abortions, were more likely to return to work, and used fewer welfare services.¹⁰ The positive findings of this randomized controlled trial have led to a second study (1988 to 1994) to test whether the model could be replicated in an urban setting (Memphis, Tenn), again supported by multiple funding agencies, including The Robert Wood Johnson Foundation, the federal government, The Pew Charitable Trusts, the Carnegie Corporation of New York, and the W. T. Grant Foundation.

CONTINUATION AND REPLICATION

The foundation faces a continuing challenge in helping grantees identify sources of ongoing support for program services following grant expiration. Identifying such funding sources also has significant implications for whether foundation-supported programs can be replicated more broadly.

To help grantees address these issues, the foundation encourages the early involvement of potential long-term funders, sometimes through the use of declining-balance budgeting (by which foundation funds decrease over time) and matching funds requirements. In addition, several of the foundation's recent child health programs, such as the Mental Health Services for Youth Program and the Child Health Initiative, are specifically designed to encourage agencies to redeploy existing funds to maximize their impact.

Clearly, meeting the needs of underserved children and youth will remain a major and important challenge for families, the health care system, and this country. Factors such as poverty, homelessness, and family dysfunction make it difficult to address adequately the health care needs of children with complex problems, such as acquired immunodeficiency syndrome, substance abuse, and mental illnesses. For the foreseeable future, multiple organizations and constituencies, from both the health and other child-serving sectors, must be engaged in efforts to develop a comprehensive response to children's needs.

I would like to acknowledge the thoughtful contributions of my colleagues, Ruby P. Hearn, PhD, Paul Jellinek, PhD, Richard Reynolds, MD, and Steven Schroeder, MD.

References

1. 1977 *National Health Care Expenditures Survey*. Washington, DC: US Dept of Health and Human Services; 1980:6. Publication (PHS) 85-3377.
2. 1987 *National Medical Expenditures Survey*. Washington, DC: US Dept of Health and Human Services; 1990:6. Publication (PHS) 90-3469.
3. Chollet D. *The Changing Pattern of Health Insurance Coverage Among Non-Elderly Families* [oral presentation]. Washington, DC: US House of Representatives Select Committee on Children, Youth and Families; July 1, 1987.
4. Blendon R, Aiken L, Freeman H, Kirkman-Liff B, Murphy T. Uncompensated care by public hospitals or public insurance for the poor: does it make a difference? *N Engl J Med*. 1986;314:1160-1163.
5. *Healthy Children: Investing in the Future*. Washington, DC: Office of Technology Assessment; 1988:5-6.
6. McCormick MC, Shapiro S, and Starfield BH. The regionalization of perinatal services: summary of the evaluation of a national demonstration program. *JAMA*. 1985;253:799-804.
7. *The Robert Wood Johnson Foundation Special Report: The Perinatal Program: What Has Been Learned?* Princeton, NJ: The Robert Wood Johnson Foundation; 1985:8.
8. *The Robert Wood Johnson Foundation Special Report: The Rural Infant Care Program*. Princeton, NJ: The Robert Wood Johnson Foundation; 1986:6.
9. Gross R, Spiker D, Constantine NA, et al. Enhancing the outcomes of low-birth-weight, premature infants: a multisite randomized trial. *JAMA*. 1990;263:3035-3042.
10. Olds DL, Henderson CR Jr, Tutelbaum R, Chamberlin R. Improving the delivery of prenatal care and outcomes of pregnancy: a randomized trial of nurse home visitation. *Pediatrics*. 1986;86:16-28.

The Challenge of Care for the Poor and Underserved in the United States

An American College of Obstetricians and Gynecologists Perspective on Access to Care for Underserved Women

Ezra C. Davidson, Jr, MD; Charles E. Gibbs, MD; Janet Chapin, MPH

• Access to pregnancy-related care for women and their infants and to reproductive health services for adolescents are significant concerns to the American College of Obstetricians and Gynecologists (ACOG). Adolescent and young adult women are among those most likely to be uninsured and lack access to health care services. Adolescent pregnancy, low-birth weight, and infant mortality remain major national burdens. The ACOG has taken the position that quality health care should be accessible to all women. The ACOG recommendations regarding health services for adolescents and the ACOG Committee on Health Care for Underserved Women's statement of principles regarding universal access for pregnancy-related care, which includes the basic scope of benefits, the characteristics of the providers, and the organization of services are described.

In 1988, more than 794 000 women did not receive prenatal care in the first trimester of pregnancy.¹ Every year, more than 10% of all 15- to 19-year-old women become pregnant.² Access to care for underserved women—in particular, pregnancy-related care for women and their infants and reproductive health services for adolescents—is a significant concern to the American College of Obstetricians and Gynecologists (ACOG). More than 30 reports and policy recommendations have been published in the past 5 years alone on the subjects of infant mortality and access to pregnancy-related services.³ Reports on adolescent pregnancy have multiplied, reflecting the concerns about pregnancies in this age group. Although some responses to the recommendations have been forthcoming at the state and federal levels, much more is needed before we will see significant improvements in health status. The time for study is past. Although we always need current data, it is time now to move forward to implement many of these recommendations.

THE PROBLEMS

Lack of health insurance decreases the likelihood that a woman will receive appropriate health care.⁴ In 1985, of the women of reproductive age, 26% did not have insur-

ance to cover maternity care, and 15% of the 3.7 million births in that year were to women with no health insurance coverage.⁵

One measure of access is entry into prenatal care. In 1988, for the nation as a whole, 24% of the women who gave birth did not receive prenatal care in the first trimester of pregnancy, and 6% received little or no care at all before delivery. For black women, the situation was worse; 40% did not receive care in the first trimester, and 11% received little or no care during pregnancy.¹

Access to prenatal care is a major factor associated with low birth weight and infant mortality.⁶ The personal and public costs of the stubbornly high percentage of low-birth-weight infants remain a national burden. The Office of Technology Assessment has estimated that a single low-birth-weight infant incurs between \$12 000 to \$40 000 in short-term hospital costs.⁷ Handicapping conditions occur in approximately 5% to 16% of the low-birth-weight infants treated in today's neonatal intensive care units.⁷ Long-term domiciliary and education costs for these disabled children are estimated at \$6000 to \$37 000 per year.⁸

In addition, adolescents and young adults are among the groups more likely to be uninsured for health care services. As of 1984, about one in every seven adolescents, approximately 4.5 million adolescents aged 10 to 18 years, had no health insurance coverage. Black adolescents were 63% more likely than white adolescents to be uninsured. Hispanic adolescents were nearly three times as likely as non-Hispanic whites to be uninsured. Adolescents living in families earning less than the federal poverty standard were three times more likely than their nonpoor counterparts to be uninsured.⁹

More than 6 million young adults, 26% of those 19 to 24 years old, were uninsured in 1984. Hispanic, black, poor and near poor, unemployed, and high school dropouts were among those young adults most likely to be without insurance. Three fourths of white young adults 19 to 24 years of age had private insurance compared with only half of blacks of the same age. More than 40% of Hispanics had no insurance, twice the rate of non-Hispanic whites.⁹ One of the most troubling issues in adolescent health care is adolescent pregnancy. More than 1 million adolescents become pregnant every year in the United States.² The birth rate for teens aged 15 to 17 years rose in 1988 for the first time in a decade, to 33.8 births per 1000 women aged 15 to 17 years.¹ Compared with the rate in

Accepted for publication January 24, 1991.

From the American College of Obstetricians and Gynecologists, Washington, DC.

Reprinted from *AJDC* (1991;145:546-549).

other developed countries, the pregnancy rate among American teenagers is among the highest in the world. It is twice the rate in England, Wales, and Canada, three times that in Sweden, and more than six times the rate in the Netherlands.²

ACOG RECOMMENDATIONS

Since 1971, ACOG has taken the position that quality health care should be accessible to all women.¹⁰ This position was reaffirmed in a policy statement adopted in July 1988.¹¹ Since 1985, through its Committee on Health Care for Underserved Women, ACOG has addressed various components of the problems related to access to care. The ACOG also has a long-standing interest in the development of adequate, comprehensive, and high-quality health services for adolescents, with special reference to reproductive health services. Since 1964, ACOG has organized initiatives in the area of adolescent health. Over the years, more than 10 policy statements, as well as numerous other reports and committee statements regarding adolescent health, have been issued. In 1985, ACOG began a public education program that broke network television barriers that prevented the provision of good, reliable information on unintended pregnancy to the American public.

SERVICES FOR ADOLESCENTS

The ACOG holds the position that health services for adolescents must be broad in scope and must be provided in the context of adequate education, social services, and family support. Health education that includes education regarding sexuality and reproduction, beginning early in a child's life, is a cornerstone of effective reproductive health services.

Moreover, contraception and family planning services must be available and accessible for all women, regardless of age, whose sexual behavior exposes them to the risk of unintended pregnancy. Contraceptive services should be offered, whenever possible, in a general health care setting that includes counseling regarding psychosocial considerations and sexually transmitted diseases. Much more outreach and publicity should be undertaken to inform sexually active adolescents about the importance and safety of contraceptive use, as well as to assist them in locating and accessing services. The ACOG has called for responsible advertising of prescription and over-the-counter contraceptives and has indicated that it would be willing to work with publishers and broadcasters to make sure the advertising claims were accurate and scientifically verifiable.¹²

The ACOG endorses the programs, including those located in schools, that provide reproductive health services in areas where such services are not available and where such services have the support and input of parents and communities. These programs appear to be most effective when they are offered within a system of comprehensive health care services. One aim of such programs should be to encourage sexually responsible behavior that is both nondestructive and nonexploitive. The ACOG also supports the recommendations of the National Academy of Science's report *Risking the Future: Adolescent Sexuality, Pregnancy and Childbearing*, including the need to maintain the availability of adoption and abortion as needed options for adolescents.¹³

The issue of confidentiality has been identified by both providers and young people as having a significant impact on access to health care. This is particularly true for reproductive health services. Health professionals have an ethical obligation to provide the best possible care and counseling in response to the needs of their adolescent patients. This obligation includes reasonable efforts to encourage the adolescent to involve her or his parents in health care decisions. The support of parents can, in many instances, increase the potential for resolving the adolescent's problems on a continuing basis. The restrictive laws and regulations affecting confidentiality found in many jurisdictions are often impediments to care and need to be revised as a matter of public policy. The ACOG, in collaboration with the American Academy of Family Physicians, the American Academy of Pediatrics, NACOG—the Organization of Obstetric, Gynecologic and Neonatal Nurses, and the National Medical Association, has developed a policy statement on confidentiality, since such assurances are essential to serve adolescents effectively. This policy statement sets forth the obligation of the providers of adolescent health care to protect confidentiality, as well as suggesting methods for clarifying the relationship to the adolescent and her or his parents.¹⁴

IMPROVING ACCESS TO PREGNANCY-RELATED CARE FOR UNDERSERVED WOMEN

Although access to all health services is important for women of all ages, among the most critical needs is access to pregnancy-related care. The ACOG Committee on Health Care for Underserved Women has developed a statement of principles regarding universal access for pregnancy-related care and the necessary characteristics of any legislation or plan that would provide such care.

The ACOG is aware of the importance of controlling costs, and this statement of principles regarding universal access should not be seen as a call for unrestrained spending. To the contrary, the college believes that comprehensive pregnancy-related care, appropriate to the various needs of each patient, is worth the initial costs and will contribute importantly to cost containment. For example, a good system of care will facilitate rapid and accurate evaluation of the effectiveness and the role of new technologies and therefore is likely to prevent unnecessary, expensive services. Administering authorities and financing plans for universal access need to be specified, but these issues are beyond the scope of the current development of the ACOG statement of principles.

Universal Access

Access to the full range of pregnancy-related services (see the list below) should be provided for all women and infants who live in the United States. It is important to note that these principles do not call for all women and infants to be covered under a single program, but there must be certain characteristics common to all coverage. Minimum benefits for all coverage and the eligibility requirements for any publicly funded and operated program should be established across the nation. Care must be organized and delivered in a manner appropriate for, and acceptable to, the pregnant woman and her family. Current public and private resources should be used whenever possible. Any

publicly funded and operated health services must be kept entirely separate, administratively and financially, from public assistance/welfare programs.

Scope of Services in Maternal and Infant Care

The ACOG Committee on Health Care for Underserved Women has established the following list of basic elements of care to which it is particularly important to ensure accessibility. Pregnancy-related care must be understood as broad in scope and variable in intensity and complexity. To the degree that an element is needed but missing or inadequate, the care is deficient. Additional emphasis should be placed on prevention and early intervention in all services, and all services should be coordinated and linked.

Planning pregnancy, and the prevention of those pregnancies that are unplanned, is an important strategy to improve maternal and infant health. All women in the United States should have access to family planning and contraceptive services.

Additionally, ACOG actively supports individual choice in regard to abortion as a necessary and safe option for all women. This position is based on the belief that decisions concerning abortion are so bound in ethical, moral, and religious complexities, as well as other personal considerations, that they are best left to a woman in consultation with her physician. The ACOG believes that continued availability of safe, legal abortion services is essential to maternal health.

A prepregnancy-related health examination is important to identify behavioral and medical factors that require modification before pregnancy to improve outcome, such as control of diabetes or smoking cessation, and should be available to all women. This evaluation is not meant to include infertility services. Additionally, early pregnancy diagnosis facilitates appropriate and timely prenatal care and should be available.

Prenatal, pregnancy-related services should be based on risk assessment with an appropriate response and include care for new or preexisting conditions that affect the pregnancy, fetal evaluation, health and childbirth education, nutritional support and counseling, substance abuse counseling and treatment, and linkage of prenatal care and delivery.

Labor and delivery should be provided in an optimal, risk-appropriate environment, as should neonatal care appropriate to the needs of the infant. Postpartum evaluation and services, including family planning and postpartum sterilization, and infant follow-up for at least 1 year should be provided after delivery. Social services support as needed should be provided throughout the pregnancy and follow-up period.

Provider Characteristics

Providers of pregnancy-related services include health care professionals and such institutions as laboratories, hospitals, health departments, and community and migrant health centers. All providers should be licensed or certified when license is not required in their jurisdiction and subject to a quality review process involving peer review. There must be a sufficient number of providers, and they must be of the appropriate disciplines required to render all of the necessary services. The relationships be-

tween the primary and referral levels of care, and between the various disciplines involved in care, should be clearly defined in contractual documents between providers. Such agreements tend to clarify both responsibility and authority and also describe the extent to which any provider should commit resources. These contracts should contain cancellation clauses and should be renegotiated at regular intervals.

Organization of Services

Maternal and infant health services may be delivered by both private and publicly funded and operated services. There are, however, certain characteristics that are important for all components. The focus of care should be health-outcome oriented. However, outreach (recruitment) for both patients and providers should be supported financially, and undergraduate, graduate, and continuing education should be supported to provide an ongoing supply of qualified providers. Additionally, research designed to improve patient care should be identified and a suitable environment for investigation encouraged.

The organization and methods used to deliver services should be efficient and cost-effective and responsive to patient needs. Both the management and clinical components of the programs should be evaluated by means of outcome and process objectives, and these evaluation results should be used in decision making. All types of qualified health care professionals and other providers should be used, and incentives must be available to encourage the provision of services in geographic areas that are difficult to serve.

Certain administrative characteristics are important for any private or public organization or agency that pays for health services. There must be a simple, responsive, and prompt paper and reimbursement flow for patients and providers. Easy access to decision makers and clerical-level workers is essential for both patients and providers. Furthermore, reliable, sufficient, and consistent funding mechanisms must be present.

Additional characteristics apply specifically to those that are publicly funded and operated. The administering agency should have a simple table of organization with clear lines of responsibility. Clinical expertise should be present within the senior management, with assurance of both professional and consumer input at the governance level. Where or when it is necessary to restrict the breadth or depth of the services to be supported or provided, the selection of the services included or excluded should be determined by a group including both health care professionals and lay persons. The particulars of reimbursement, quality assurance, and utilization review should be specified through a negotiated contract between the provider and the administering authority. Health services should be completely separate from welfare services, in attitude and approach.

CONCLUSION: FUTURE ACTIONS

The ACOG will continue its organizational focus on these issues through two permanently established committees of its executive board. In 1990, a specific goal of advocacy for access to prenatal care for all women was articulated by the ACOG. A significant portion of ACOG's government relations activity focuses on improving access to quality health care. The college believes that this nation

has a moral obligation to ensure health care for women and children at the most vulnerable time in their lives. Furthermore, providing effective maternal and infant care is cost-effective for our society as a whole.

Public education must continue to focus on the consequences that will result if we fail to improve the system of health care for pregnant women and infants in this country. The ACOG intends to educate its fellows about how to improve systems of health care and access to care and to solicit their involvement, in conjunction with government and other policy makers, in actively working toward these solutions.

Perhaps one of our most important activities is the recently established National Fetal and Infant Mortality Review Program. With grant support from the Maternal and Child Health Bureau, we have brought together many organizations to provide guidance and assistance to communities to identify the specific causes of fetal and infant mortality in their areas and to develop solutions targeted to those specific problems.

Several other aspects of this nation's health care delivery system must be repaired if access to care for the poor and the uninsured is to be guaranteed.

The problems regarding professional liability must be ameliorated by ensuring care for affected infants and support for their families. To promote self-discipline in the profession, there must be protection for those who participate in peer review and sanctioning activities.

In addition, difficulties surrounding referrals, transfers of high-risk patients, and the provision of consultation must be resolved in ways that both protect patients and allow physicians to provide appropriate levels of care for higher-risk patients. Furthermore, reimbursement and compensation for nurses, technical workers, and hospitals must be enhanced.

It is clear that public hospitals and health departments, which constitute only a portion of the current system, can no longer be expected to bear the major burden of providing care for the poor and uninsured without a greatly increased level of support.

It is naive to assume that one organization or group of organizations alone, such as organized medicine, no matter how well intentioned, can solve the problems of access to care. What is needed in this country, as in other countries, is leadership and the social will to make sure that universal access to care becomes a reality.

A history of ACOG activities in adolescent health care and a sum-

mary of all ACOG policies regarding adolescent health are available from the Resource Center of the American College of Obstetricians and Gynecologists, 409 12th St SW, Washington, DC 20024-2188.

References

1. National Center for Health Statistics. Advance report of final natality statistics, 1988. *Monthly Vital Stat Rep.* 1990;39(4; suppl):1-48.
2. Henshaw SK, Kenney AH, Somberg D, Van Vort J. *Teenage Pregnancy in the United States: The Scope of the Problem and State Responses*. New York, NY: Alan Guttmacher Institute; 1989.
3. Healthy mothers, healthy babies: recent policy recommendations. In: *Supplement to a Compendium of Program Ideas for Serving Low Income Women*. Washington, DC: US Dept of Health and Human Services, Public Health Service, Health Resources and Services Administration, Maternal and Child Health Bureau; January 1990:1-4.
4. *Medicaid Recipients and Uninsured Women Obtain Insufficient Care*. Washington, DC: United States General Accounting Office; September 1987.
5. *Blessed Events and the Bottom Line: Financing Maternity Care in the United States*. New York, NY: Alan Guttmacher Institute; 1987.
6. Brown S, ed. *Preventing Low Birthweight*. Washington, DC: National Academy Press; 1985.
7. *Neonatal Intensive Care for Low Birthweight Infants: Costs and Effectiveness, Health Technology Case Study 38*. Washington, DC: Congress of the United States, Office of Technology Assessment; December 1987.
8. *Healthy Children: Investing in the Future*. Washington, DC: Congress of the United States, Office of Technology Assessment; February 1988. OTA-H-345.
9. Newacheck PW, McManus MA, Brindis C. Financing health care for adolescents: problems, prospects, and proposals. *J Adolesc Health Care.* 1990;11:398-403.
10. American College of Obstetricians and Gynecologists. National health care for women. *Obstet Gynecol.* 1972;39:603-608.
11. *Access to Women's Health Care: ACOG Policy Statement*. Washington, DC: American College of Obstetricians and Gynecologists; 1988.
12. *Contraceptive Advertising: ACOG Policy Statement*. Washington, DC: American College of Obstetricians and Gynecologists; 1987.
13. Hayes C, ed. *Risking the Future: Adolescent Sexuality, Pregnancy and Childbearing*. Washington, DC: National Academy Press; 1987.
14. *Confidentiality in Adolescent Health Care: ACOG Policy Statement*. Washington, DC: American College of Obstetricians and Gynecologists; 1988.

The American Academy of Pediatrics Response to the Growing Health Needs of Children

James E. Strain, MD

At its planning meeting in May 1988, the executive board of the American Academy of Pediatrics (AAP) established the promotion of access to child health care as its top priority. Later in the year, the following resolution was passed at the chapter president's forum: "That the Academy develop and support legislation to assure a health program that guarantees all children and pregnant women access to a comprehensive (basic) package of health care benefits that treats all children and pregnant women equally, and that the Academy work with legislators to draft a model program that, to the extent practicable, maintains parental control of health care decisions, preserves the physician's primary obligation to his or her patient, and effectively utilizes private insurers."

In October 1988, the executive board approved a universal access-to-care proposal consisting of three components: (1) the introduction of federal legislation that guarantees financial access to medical care for all children and pregnant women; (2) the establishment of community-based health projects that meet the special needs of children at the local level; and (3) the introduction of a public relations program that increases public awareness of the importance of child health issues. The three components of the AAP access initiative are described in this article.

FEDERAL LEGISLATION

In 1987, approximately 10 million children aged 0 through 21 years were without health insurance for the entire year. Another 10 million were uninsured for part of the year.¹ Employers faced with escalating insurance costs are increasing employees' share of premium costs for dependents, thereby discouraging dependent coverage.² In addition, plans that do cover dependents often fail to meet the health needs of children. Most child health services are provided in an ambulatory setting and are often not covered by health insurance. Traditional insurance has been designed to cover hospital care. While this type of coverage is important for the occasional child with a catastrophic or long-term illness, the vast majority of children will have no need for this service.

Some children are classified as uninsurable because of a preexisting condition. Children with congenital defects, chronic diseases, or other disabling conditions are often excluded from coverage, particularly when a parent changes jobs. Insurance companies are reluctant to accept children who may require more than the usual amount of care.

More than one in five children in this nation live in poverty.³ About half of the poor children are receiving Medicaid benefits.⁴ Although 52% of those eligible for Medicaid are children, less than 20% of Medicaid dollars are spent for their care.⁴ Thus, in both the private and public sectors, there are significant gaps in the health insurance coverage for children.

Uninsured children utilize physician services less often than do insured children,^{5,6} particularly preventive health services.⁶ Delays in treatment often add to the cost of care and reduce the likelihood of a successful outcome.

To meet the needs of all children, including the uninsured, underinsured, and uninsurable, the AAP has developed a proposal that guarantees financial access to care for all children through age 21 years and all pregnant women. This plan is designed to be the least disruptive of the present health care system. It is a one-tiered system in which children insured in the private and public sectors have equal benefits. These benefits include preventive health services, the treatment of acute and chronic illnesses, and the management of disabling conditions that require care coordination. Standards of care will be set at the federal level, but administration of the program will be left to the states. The cost of the program will be borne by the public and private sectors, and families that can afford to pay will share in the costs. There will be a fair and equitable payment for services rendered and a simplified billing system.

THE AAP PLAN Benefits

Benefits include preventive health care, primary medical care, and extended care requiring coordination of services.

1. Preventive health care includes the following: (a) office visits, immunizations, and laboratory services as recommended by the AAP in its periodicity schedule; (b) maternity services; (c) family planning services; (d) care of the newborn, including physician attendance at high-risk deliveries; (e) child abuse and neglect assessment; and (f) preventive dental care. Because of the importance of preventive health care, there will be no copayments or deductibles for anyone receiving these services.

2. Primary medical care includes the following: (a) hospital care; (b) physician services for acute and chronic conditions; (c) laboratory and other diagnostic services; (d) acute dental care; (e) medical and surgical supplies; (f) corrective eyeglasses and lenses; (g) hearing aids; (h) medical equipment; and (i) prescription drugs, including nutritional supplements. For families below 133% of the poverty level, no coinsurance or deductibles will be required

for these services. For those above 200% of the poverty level, there will be a \$200 annual deductible per family and a 20% copayment. A sliding scale will be used for families between 133% and 200% of the poverty level.

3. Extended medical care requiring care coordination includes the following: (a) care coordination for chronically ill and other "at risk" children; (b) orthodontia; (c) treatment of developmental and learning disabilities; (d) substance abuse services; (e) speech therapy; (f) occupational therapy; (g) physical therapy; (h) hospice care; (i) respite care; (j) recuperative stays in long-term care facilities; and (k) nutritional assessment and counseling. For those above 200% of the poverty level, there will be a maximum coinsurance of 30% for these services. No copayments or deductibles will be required of families with incomes below 133% of poverty. A sliding scale will be used for families between 133% and 200% of poverty. There will be an out-of-pocket cap of 10% of family income or \$1000 per year for an individual and \$3000 per family, whichever is less, for all services provided under the plan.

To the extent possible, insurance mechanisms will be used to fund benefits included in the AAP proposal. However, direct state or federal funding will be required for some services. Services for children with special health care needs and primary care services where none are locally available are among those that may need direct funding. The state Title V maternal and child health agencies will continue to play an important role in monitoring care and providing services not covered by insurance.

Financing

Funding for this plan will come from private and public sources. In the private sector, employers will be required to provide the mandated benefit package for children and pregnant women or pay a 3.17% employee payroll tax based on 1990 calculations. The shared cost of dependent coverage cannot be a greater percentage of the total premium than the shared cost of the employee coverage and cannot exceed 25% of the total premium.

In the public sector, a fund will be established at the state level to purchase insurance for families not covered by employer insurance. It will have several income streams. The tax imposed on employers who elect not to provide coverage for dependents of their employees or whose benefit package fails to meet mandated benefit standards will be one source of funding. Federal and state Medicaid funds currently being used to provide medical services for children and pregnant women will be another source. Finally, premiums paid by families not covered by employer insurance will be added to the fund. If the family income is above 200% of the poverty level, an annual premium of \$458 will be paid per family. No premium payments will be required for those families below 133% of the poverty level, and a sliding scale will be used to determine the premium costs for families falling between 133% and 200% of the poverty level.

Multiple private insurers will bid on the state contracts just as they do in the private sector. The benefit package must be the same for employer insurance and for the state-administered fund. In the required package, insurers will be allowed some flexibility in the scope and duration of benefits and in the amount of cost sharing, provided the plan is actuarially equivalent.

Administration

The federal government will mandate a benefit package. The Secretary of the US Department of Health and Human Services will have the authority to establish boundaries within which the states must function.

The actual administration of the program will be at the state level. States will establish policies that control marketing of insurance and will develop and maintain the system. They will monitor the health status of children and pregnant women and will collect data on unmet needs. They will be responsible for regulating fiscal intermediaries and for developing performance standards for insurers.

COMMENT

The AAP plan replaces the children's and pregnant women's portions of Medicaid. Medicaid has perpetuated a two-tiered system of care in which eligibility, benefits, and reimbursement limited by lack of funds, vary from state to state. Physician participation in Medicaid has declined in recent years.⁶ Billing procedures have become burdensome.

The plan proposed by the AAP provides a uniform package of benefits for all children and pregnant women. It is an insurance-based program with private insurers bidding for contracts in the public and private sectors. It provides for cost sharing of premiums, copayments, and deductibles based on the ability to pay. It underwrites the cost of care for the poor.

The AAP's proposal will increase the total cost of health services for children and pregnant women from the 1990 level of \$98.8 billion to \$111.4 billion, an increase of approximately \$12 billion. Compared with the total cost of medical care in the United States, which was \$650 billion in 1990,⁷ the added cost of providing health care for all children and pregnant women is relatively low.

The AAP intends to introduce legislation in the 1991 session of Congress that incorporates the principles enunciated in the plan. Because of the widespread dissatisfaction with the current methods of financing health care, it is likely that many new health care financing proposals will be considered by the 102nd Congress. The AAP plan is the only one that specifically addresses the care of children and pregnant women. The AAP supports guaranteed financial access to care for all United States citizens, but we believe that if an incremental approach is necessary, the first step should be coverage for children and pregnant women. The value of preventive care and early intervention for children and pregnant women, the relatively low cost, and the large number of women and children living in poverty are strong arguments for making children and pregnant women our top priority.

Community-Based Programs

While providing health insurance for all children and pregnant women is an important first step in guaranteeing access to medical care, it is clearly not the total solution to the mounting health problems of the young. Poverty and its social consequences account for much of the morbidity in our nation's children. Until mothers and children live in a safe environment and have sufficient food and adequate housing, the availability of medical care will have limited impact on the health of our children.

These societal problems are beyond the scope of activity of the AAP; however, we should be able to address many nonfinancial barriers to health care. For example, there are

inadequate numbers of health professionals to deliver care in some parts of the country, particularly in rural and inner-city areas. Transportation to and from the sources of care can be difficult when medical care is not readily accessible. The process of enrollment in the Medicaid program is often difficult and demoralizing. Many of the Medicaid registration requirements appear to be designed to keep children out of the program rather than bring them in.

In addition, cultural differences sometimes make it difficult for families to use traditional health care services. They often feel ill-at-ease in physicians' offices or in emergency centers. Reliance on folklore medicine is common among some ethnic groups.

The AAP believes that many of these problems can be solved at the local level. Communities understand the health needs of their children and, given the necessary resources, are able to develop programs that meet those needs.

To assist communities in this effort, the AAP initiated two community-based programs. The first, "The Healthy Tomorrows Partnership For Children," is a program funded by the federal Maternal and Child Health Bureau and jointly administered with the AAP. The program is designed to fund community-based projects in areas where access to care is limited and child health needs are not being met. A funded program receives \$50 000 each year for 5 years provided that annual matching funds of \$100 000 are obtained from local sources. An additional requirement is the participation of the local pediatric community and the state Maternal and Child Health Agency.

In 1989, 113 grant applications were submitted. Ten were selected by a panel of experts appointed by the AAP and Maternal and Child Health Bureau. Among the projects selected were the Family Care Center Health Project in Lexington, Ky; the Healthy Start Children's Clinic in Fort Collins, Colo; the Parent-Pediatric Partnership in Honolulu, Hawaii; and Project Caring in Pittsburgh, Pa. Site visits were carried out by members of the AAP Project Advisory Committee and each of the 10 programs has been approved for continued funding for a second year.

The program was continued in 1990 with the selection of 10 additional projects, all created to meet the special needs of children in local communities. These include the Jackson County Prenatal Clinic in Jackson, Mich; the First Steps Primary Program in Baton Rouge, La; and the Rural Partnership For Children in Omaha, Neb.

The second AAP community-based effort is the Healthy Children program, originally conceived and directed by Philip Porter, MD, and funded by the Robert Wood Johnson Foundation. Dr Porter has had great success during the past 20 years in helping communities recognize their child health needs and sharing with them the experiences of other communities. He has accomplished this by providing consultants from other successful programs and advising on new and innovative ways to secure local funding. Among the programs developed with the assistance of Dr Porter are a school-based primary care program, a program for social enrichment and primary care of preschool children, a pregnancy prevention program, a comprehensive primary care program for mothers and

children, and a program for the care of handicapped children in rural America.

Healthy Children has demonstrated that a broad base of community leadership is needed to successfully introduce a health care program at the community level. Public health officials, school administrators, political leaders, nurses, child advocates, church leaders, and pediatricians all bring special skills and experience to the programs. All can play a significant role in meeting the needs of children in their communities.

During the past 2 years, as a result of funding from the Robert Wood Johnson Foundation, the Healthy Children concepts have been incorporated into an AAP program to assist local communities in their planning efforts. The program does not make grants, but provides technical assistance and advice under the direction of Dr Porter. Forty thousand pediatricians have learned about the program through direct mailings from the AAP. Using the existing network of state AAP chapters, pediatricians with a special interest in community-based activities have been identified and have agreed to serve as state facilitators.

In August 1990, these facilitators met in Chicago, Ill, to discuss their programs and share information. This very successful conference laid the groundwork for future development of community-based programs throughout the country. In addition, lessons learned from these programs can contribute to a better understanding of child health needs and to the establishment of an effective national child health policy.

Public Awareness Program

The third component of the AAP access initiative is the public awareness program. The public must become convinced of the importance of child health to the future of the nation. We must assume responsibility for the health of all of our children—rich and poor, black and white, disabled and healthy. This will require a commitment on the part of the public and, ultimately, state and federal legislators to put children's issues first. The AAP expects to accomplish this with the public awareness program.

Health professionals have an important role to play in keeping children healthy and in treating their illnesses. However, other factors are equally important. A polluted environment can have serious health consequences. Lead and toxic chemicals can have damaging effects on children.^{8,9} Certain activities related to life-styles, such as substance abuse and risk-taking behaviors, have an immediate impact on health. Inappropriate diets, sedentary behavior, and tobacco use can also have long-term consequences.

There is a definite relation between health and education. An unhealthy child will not do well in school. In 1988, there were 4 300 000 children and young adults aged 14 to 24 years who did not attend school regularly and/or had not completed 12th grade or received a general equivalency degree.¹⁰ Many children who do graduate are functionally illiterate. These are alarming statistics in a nation that is being forced to compete in the world market. Children's health and education go hand in hand and must be our nation's highest priorities.

These messages will be taken to the public with the assistance of a national public relations firm. Marketing a product is difficult and expensive. Marketing an idea is even more challenging. The AAP intends to seek industry

support for programs that highlight solutions to the problems of children. We believe industry is interested, not only from a humanistic point of view, but also out of concern for the health and education of our nation's future work force. Contributions from foundations and individuals will also be solicited to support the public awareness program.

The AAP also recognizes that there are other groups with an interest in promoting child health. We intend to work with these organizations to enhance their activities and to broaden their scope of influence.

The specific objectives of the public awareness program are (1) to convince business leaders, legislators, and the public at large of the importance of child health and the long-term benefits of improving the health of our nation's children, and (2) to generate public support for improving access to care for children and pregnant women by defining the barriers to care and the means of overcoming those barriers.

The AAP is under no illusion that changing public opinion or creating a ground swell of public support for children's health issues will be easily accomplished, but over a period of time, we believe an informed and aroused public will demand that children's issues be given a higher priority on the legislative agenda.

The AAP invites the support and participation of all pediatric organizations and other child advocates in these important child health initiatives.

References

1. Short P. *Estimates of the Uninsured Population, Calendar Year 1987*. Rockville, Md: US Public Health Service; 1990. US Dept of Health and Human Services publication (PHS) 90-3469.
2. Congressional Research Service. *Health Insurance and the Uninsured: Background Data and Analysis*. Washington, DC: US Government Printing Office; 1988.
3. Plotnick RD. Directions for reducing child poverty. *Social Work*. 1989;34:523-530.
4. Office of Maternal and Child Health. *Child Health USA 1989*. Washington, DC: US Government Printing Office; 1989.
5. Rosenbach ML. The impact of Medicaid on physician use by low-income children. *Am J Public Health*. 1989;79:1220-1226.
6. Bloom B. *Health Insurance and Medical Care: Health of Our Nation's Children, United States, 1988*. Hyattsville, Md: National Center for Health Statistics; 1990.
7. Yudkowsky BK, Cartland JDC, Flint S. Pediatrician participation in Medicaid 1978-1989. *Pediatrics*. 1990;85:567-577.
8. American Academy of Pediatrics, Committee on Environmental Hazards and Committee on Accident and Poison Prevention. Childhood lead poisoning. *Pediatrics*. 1989;83:799-800.
9. American Academy of Pediatrics, Committee on Environmental Hazards. Pesticide residue in the diet of children. *AAP News*. 1989;5:10.
10. Statistical Abstract of the United States. *The National Data Book*. 110th ed. US Department of Commerce, Bureau of the Census; 1990.

Socioeconomic Status and Visual Impairment Among Urban Americans

James M. Tielsch, PhD; Alfred Sommer, MD; Joanne Katz, MS; Harry Quigley, MD; Sandi Ezrine, MS; and the Baltimore Eye Survey Research Group

● The Baltimore Eye Survey is a population-based study of ocular disorders conducted in East Baltimore, Md, designed to determine the prevalence and severity of vision loss and ocular disease and their relationships to socioeconomic and other risk factors. This survey comprised 5300 subjects (2911 whites and 2389 blacks). Visual impairment was associated with age, race, general health status, educational level, income, and employment status. An identified association of race with blindness and visual impairment was reduced, but not eliminated, after adjustment for these socioeconomic factors, indicating that socioeconomic status itself is an important determinant of visual impairment.

A number of population-based surveys on visual impairment have been conducted over the last 20 years in the United States,¹⁻⁴ most of which have originated from extensive, multipurpose health interview or examination surveys; blindness registration systems; and in-depth surveys of specific populations. In general, these studies have reported prevalence rates of blindness and/or visual impairment stratified by selected demographic and sociodemographic variables.¹⁻⁴ Little work has been done, however, to sort out the independent associations of these variables with reduced vision. Such analyses are important for obtaining leads for future etiologic research and to provide parameters that can be used to target subgroups of the population for special intervention programs. In addition, much of the work done in this area has relied on self-reported measures of vision loss based on questionnaire responses. While these measures focus on impairments of functional importance to patients, they also suffer from a lack of standardization among subjects.

The Baltimore Eye Survey is a population-based prevalence and risk factor survey of ocular disorders designed to fill many of the gaps in our current understanding of the prevalence and severity of vision loss. Detailed information was collected for a variety of demographic and social variables so that high-risk groups could be described and the independent association of such factors with vision loss could be measured. A previously published article⁵ described the prevalence of blindness and visual im-

pairment by age, race, and sex. Herein, we focus on socioeconomic risk factors and their influence on the definitions of groups at high risk of developing vision loss.

PATIENTS AND METHODS

The Baltimore Eye Survey examined ocular disorders among subjects aged 40 years or older conducted in the neighborhoods of East Baltimore, Md. Detailed methods of this study, a summary of which is contained here, have been published elsewhere.⁵

A stratified cluster sampling technique with probability of selection proportionate to cluster size was used to select 16 cluster areas in the eastern and southeastern Health Planning Districts of Baltimore City with the goal being to obtain samples of roughly equal numbers of blacks and whites. This sampling strategy began by stratifying census tracts into three categories based on the racial distribution of the population as reported in the 1980 census and included black, white, and mixed-race strata. Black and white tracts were defined when greater than 75% of persons aged 40 years or older were of either race. Each census tract was divided into clusters of approximately 600 persons aged 40 years or older. Within each stratum, census tracts were ordered geographically from east to west to avoid clustering of the sample close to one source of medical care. A systematic sample of census tracts was drawn from these ordered lists based on the proportion of total clusters in each race-specific stratum. Within each selected census tract, a cluster was selected at random. All subjects aged 40 years or older who resided in these cluster areas were recruited for participation through personal field visits. Within each cluster, an initial household screening for eligible subjects was conducted at 99.2% of the 7754 residential dwelling units. A total of 7194 eligible subjects was identified. An enrollment interview was then conducted with 6892 (95.8%) of the eligible subjects. This short interview included questions on demographic factors, use of general health and eye care services, and history of glaucoma.

Subjects who completed the enrollment interview and who were medically capable of completing an ophthalmologic screening examination were recruited for such an examination at screening centers established in their neighborhoods. The screening examination consisted of measuring height, weight, blood pressure, pulse, refraction, visual acuity, and visual fields; applanation tonometry, and stereo fundus photography; and detailed personal interviews about ophthalmic medical histories and prescription drug, tobacco, and alcohol use. Visual acuity was measured at 4 m using the charts described by Ferris

Accepted for publication February 15, 1991.

From the Dana Center for Preventive Ophthalmology, Wilmer Eye Institute, and the School of Hygiene and Public Health, The Johns Hopkins University (Drs Tielsch, Sommer, and Quigley and Ms Katz), and Survey Research Associates, Inc (Ms Ezrine), Baltimore, Md.

Reprinted from *Archives of Ophthalmology* (1991;109:637-641).

et al⁶ and Ferris and Sperduto⁷ and a specially constructed, backlit box. Visual acuity was measured separately for each eye and defined as the lowest line on the chart for which the majority of letters were read correctly. Visual acuity was measured with the refractive correction worn by the subject in place to the screening center and again with the full refractive correction as determined by the screening examination. If still less than 20/20, visual acuity was measured using a pinhole. Best corrected visual acuity was defined as the best of all visual acuity measurements in the better eye. Screening results were obtained for 5341 (79.2%) of the 6746 subjects who qualified for examination.

Subjects who met any of the referral criteria, including elevated intraocular pressure, best corrected visual acuity of worse than 20/30 in either eye, visual field loss, abnormal optic disc findings, or a history of glaucoma underwent a definitive ophthalmologic examination at the Wilmer Eye Institute, Baltimore, Md, with subspecialty referral if necessary. Blindness and visual impairment were defined using the traditional cutoff points used in the United States: visual acuity of 20/200 or worse for blindness and visual acuity between 20/40 and 20/200 for visual impairment.

Socioeconomic variables available for analysis were collected during the enrollment interview and included age, race, sex, marital status, educational level, general health status, employment status, and frequency of visits to physicians and eye-care specialists. Additional data, including household income and the proportion of households below poverty level, were available at the census tract level from the 1980 census. The prevalence of blindness and visual impairment by age, race, and sex have been previously reported.⁵ This article focuses on associations of the remaining socioeconomic variables with blindness and visual impairment.

Adjustment for age (and sometimes race) was performed using linear regression techniques. Age was included in the regression as a second-order polynomial and race as a dichotomous variable. Other variables such as educational level, employment status, general and relative health status, and use of health care services were categorized into the groups shown in the tables. Gender was not associated with the prevalence of blindness or visual impairment⁵ and, therefore, was not taken into account in the adjustment.

Regression analyses of visual impairment (visual acuity between 20/40 and 20/200) excluded the blind. Additional analyses included all those with best-corrected visual acuities of worse than 20/40.

F tests were based on the test for conditional error, in which a full model was fit to the data, then a second model fit to the data that excluded all categories of a particular variable.⁸ Results do not account for the cluster sampling strategy because there was no indication that blindness or visual impairment clustered after controlling for age and race.

RESULTS

A total of 5341 subjects underwent the ophthalmologic screening examination (2913 whites, 2395 blacks, and 33 subjects of other races). The "other race" group was excluded owing to the smallness of the sample, and visual acuity information regarding eight subjects was unavailable, leaving 5300 subjects available for analysis.

Table 1.—Prevalence of Blindness and Visual Impairment by Educational Level Adjusted for Age and Race*

No. of Years of Education	Visual Impairment, No. (Adjusted Rate, %)	Blindness, No. (Adjusted Rate, %)
0-6 (n=1017)	75 (5.09)	28 (1.80)
7-11 (n=2750)	58 (2.35)	24 (1.01)
12 (n=1070)	16 (2.86)	8 (1.22)
>12 (n=400)	3 (1.94)	1 (0.64)
P		
F test†	.0003	.20
Student's t test‡	.0002	.03
β§	.003	.001

*Information on educational level was unavailable from 63 subjects.

†For educational level as a categorical variable.

‡Test of the continuous regression coefficient.

§Regression coefficient for years of education as a continuous variable.

Level of education as measured by the number of years of schooling completed was inversely associated with the prevalence of blindness and visual impairment (Table 1). Educational level was significantly associated with visual impairment and showed a roughly linear decrease in prevalence with increasing numbers of years of education (Table 1). A similar association was observed regarding the prevalence of blindness, but this was not significant at the 5% level because of the small numbers of blind subjects. Using years of education as a continuous variable yielded essentially the same patterns (Table 1).

Employment status was strongly associated with both blindness and visual impairment (Table 2). Most of this effect, however, was due to those subjects who were classified as disabled. Disabled persons had between two and 10 times higher adjusted prevalences than those in the other employment categories. Employed, retired, unemployed subjects, and housewives had similar prevalences of blindness. Retired subjects had significantly lower prevalences of visual impairment than employed subjects, unemployed subjects, and housewives. Disabled subjects had significantly higher prevalences of visual impairment than subjects in any of these groups. Despite this strong association, 12.4% or fewer disabled subjects had visual acuities of worse than 20/40, indicating that vision loss was a relatively minor determinant in classifying this group as disabled for employment purposes.

Data on household income were not collected because of concerns about the potential impact of these sensitive questions on response rates to the examination component of the study. To examine the association of vision loss and income, we calculated the age-adjusted rates of low vision (worse than 20/40) for each of the 16 sample clusters and compared those adjusted rates with the median household income and proportion of the population below the poverty level for the census tracts of the clusters as reported by the 1980 census.⁹ The age-adjusted rates were plotted against median household income and proportion of households below poverty level; the results are shown in Figs 1 and 2. Both analyses showed strong correlations between the prevalence of low vision and these two measures of household income. The regression model

Table 2.—Prevalence of Blindness and Visual Impairment by Employment Status Adjusted for Age and Race*

Employment Status	Visual Impairment, No. (Adjusted Rate, %)	Blindness, No. (Adjusted Rate, %)
Employed (n=1714)	7 (3.07)	4 (0.96)
Homemaker (n=1057)	38 (2.68)	7 (0.43)
Retired (n=1569)	59 (0.84)	25 (0.88)
Disabled (n=653)	49 (8.11)	28 (4.31)
Unemployed (n=302)	4 (3.65)	0 (0.49)
P†	<.0001	<.0001

*Data on employment status were unavailable from five subjects.

†For employment status as a categorical variable.

estimated that for every additional \$1000 of median income, the prevalence of vision worse than 20/40 declined by 0.32% ($P<.005$), and for every 10% rise in the proportion of families below poverty level, the prevalence of low vision rose 0.44% ($P<.03$).

Subjects who reported poor general health or poor health relative to others their age had significantly higher rates of blindness and visual impairment than those who reported better health (Table 3). This strong association was confined to the extremes of the distributions of health status. Those who reported excellent, good, or fair general health and those whose health status was better than or similar to others their age had similar rates of blindness and visual impairment.

There was little association of blindness and visual impairment with use of health care services (Table 4). The prevalence of blindness and visual impairment was higher among those who had been to a physician or received eye care in the 12 months before the survey began than among those who had received such services between 1 and 5 years prior to the survey. Among those who last received such services more than 5 years prior to the survey, the prevalence of blindness and visual impairment was even higher than that of the most recent users of health care services. Neither of these differences in measures of health service use reached statistical significance (Table 4).

To evaluate the independent association of these sociodemographic variables with blindness and visual impairment, a regression model was constructed that included age, age squared, race, educational level (6 years or less vs more than 6 years), employment status, and general health status (excellent to fair vs poor). Relative health status was not included because it essentially duplicated the information in the general health status variable, and use of health care services was not included because there was no evidence that it was associated with blindness and visual impairment after adjustment for age and race. The results are presented in Table 5 and show no major changes in the patterns of associations from those described in the previous tables. Education remained significantly associated with visual impairment. The pattern of employment status as shown in the tables was also similar, with disabled subjects having a significantly higher prevalence of blindness and visual impairment than subjects in other employment categories for both definitions of poor vision. Retired subjects also had significantly lower rates of visual impairment than did all other groups. General health status showed little change from the patterns

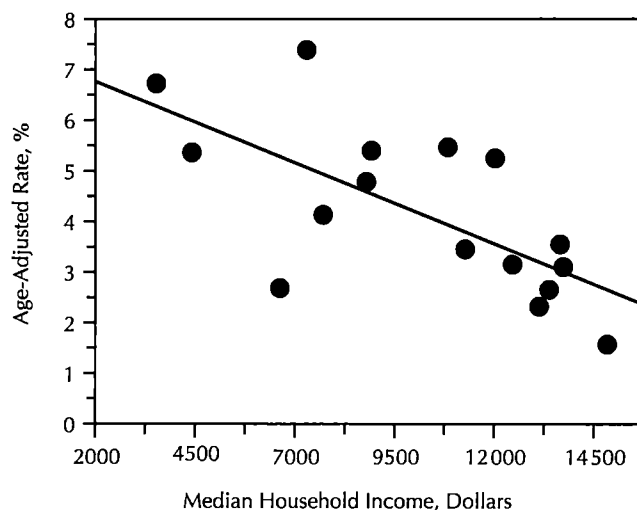


Fig 1.—Scattergram and least-squares regression line of age-adjusted prevalence of low vision (worse than 20/40) and median household income of 16 sample areas in East Baltimore, Md.

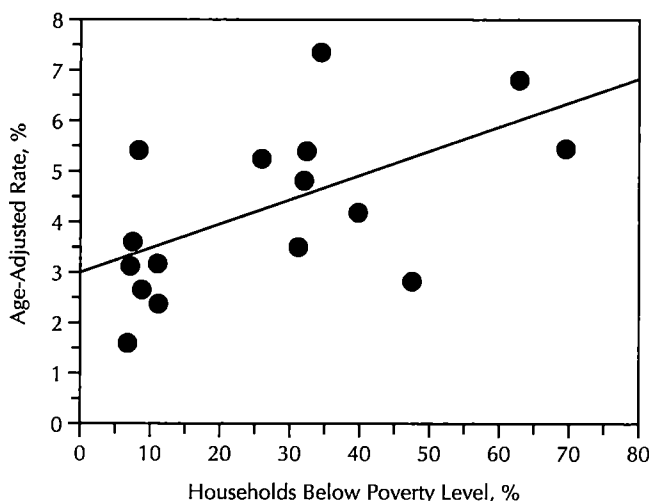


Fig 2.—Scattergram and least-squares regression line of age-adjusted prevalence of low vision (worse than 20/40) and the proportion of households below poverty level of 16 sample areas in East Baltimore, Md.

reported in Table 4, with those reporting poor general health having higher rates of visual impairment.

Interestingly, this analysis showed a substantial reduction in the association of race and the prevalence of blindness and visual impairment after adjusting for the other sociodemographic variables. Adjusting only for age produced prevalence ratios (blacks to whites) of 1.79 for visual impairment and 2.30 for blindness, both of which were significantly different from 1.0 at the 1% level.⁵ After adjusting for the other variables in this report, the prevalence ratios (blacks to whites) decreased to 1.22 and 1.42 for visual impairment and blindness, respectively, indicating significant confounding of the association of poor vision and race using these other sociodemographic factors.

COMMENT

The association of visual impairment with lower socioeconomic status was not a surprise and has been noted in other studies. The National Health Interview Survey

Table 3.—Prevalence of Blindness and Visual Impairment by Health Status Adjusted for Age and Race*

	Visual Impairment, No. (Adjusted Rate, %)	Blindness, No. (Adjusted Rate, %)
General health status		
Excellent (n=707)	12 (2.42)	4 (0.82)
Good (n=2325)	40 (1.92)	21 (0.98)
Fair (n=1618)	45 (2.67)	20 (1.18)
Poor (n=640)	59 (8.50)	19 (2.54)
Pt	<.0001	.01
Health status relative to others of the same age		
Better (n=2047)	53 (2.25)	21 (0.90)
Same (n=2336)	46 (2.34)	24 (1.15)
Worse (n=638)	47 (7.36)	16 (2.41)
Pt	<.0001	.009

*Data on general health status were unavailable from 10 subjects, and data on relative health status were available from 279 subjects.

†By an F test of health status as a categorical variable.

Table 4.—Prevalence of Blindness and Visual Impairment by Use of Health Care Services Adjusted for Age and Race*

	Visual Impairment, No. (Adjusted Rate, %)	Blindness, No. (Adjusted Rate, %)
Time since last visit to a physician, y		
<1 (n=4323)	136 (3.00)	57 (1.26)
1-2 (n=464)	11 (3.59)	3 (0.94)
3-5 (n=283)	2 (1.40)	1 (0.56)
>5 (n=219)	6 (3.50)	3 (1.68)
Pt	.33	.62
Time since last visit for eye care, y		
<1 (n=2537)	77 (2.83)	38 (1.18)
1-2 (n=1477)	39 (3.12)	10 (0.75)
3-5 (n=714)	21 (2.73)	4 (0.28)
>5 (n=548)	18 (3.48)	10 (1.51)
Pt	.81	.11

*Data on visits to physicians were unavailable from 11 subjects, and data on medical visits for eye care were unavailable from 24 subjects.

†By an F test of health care use as a categorical variable.

showed strong associations between self-reported inability to read a newspaper and both educational level of the head of household and family income.⁴ The National Health and Nutrition Examination Survey also showed an inverse association of visual acuity with educational level.¹ Our data corroborate these reports even after adjusting for other potentially confounding variables such as age and race. This association, however, is unlikely to be unidirectional. While it is likely that persons with lower economic status in the United States may be more likely to suffer from poor vision for many reasons, it is also likely that visual impairment lowers earning potential because of both unemployment and underemployment of visually impaired workers. Such earnings gaps between visually

Table 5.—Adjusted Prevalence Rates of Blindness and Visual Impairment*

Variable	Visual Impairment, Adjusted Rate, % (P)	Blindness, Adjusted Rate, % (P)
Race		
White	2.65	1.03
Black	3.25	1.46
	(.20)	(.16)
Educational level, y		
0-6	4.45	1.55
>6	2.56	1.14
	(0.002)	(.31)
Employment status †		
Employed	3.36	0.99
Homemaker	2.83	0.52
Retired	0.97	0.87
Disabled	6.40	4.14
Unemployed	3.45	0.49
	(.44)	(.29)
	(.001)	(.80)
	(.0003)	(<.0001)
	(.93)	(.45)
General health status		
Excellent to fair	2.37	1.19
Poor	7.05	1.44
	(<.0001)	(.61)

*All prevalence rates were adjusted for age, race, educational level, employment status, and general health status. P values are by t tests of linear regression coefficients in comparison with the indicated reference category.

†P values are comparisons with the employed.

impaired and nonimpaired workers can approach 50%.¹⁰ Our data also confirm an association between visual impairment and employment status, especially among the disabled. Again, the direction of any causal inference regarding the association between employment status and visual impairment is difficult. This is also true of general health status because poor vision is likely to influence a person's self-reported level of well-being. While the causal implications are unclear, subjects with poor health and the disabled are more frequent users of medical care services. Such care settings, therefore, may offer an opportunity to identify patients with ocular disorders that lead to visual impairment so that necessary ophthalmologic care of their treatable conditions is obtained.

We were surprised by the lack of association between use of general health care or eye care services and blindness or visual impairment. Given that as much as 40% of all bilateral blindness in this study was potentially curable with appropriate surgical intervention (data not shown), it would be reasonable to expect that use of such services would be lower among blind and visually impaired subjects than among nonimpaired subjects. This incongruity may be due to the lack of adequate detail in our questions regarding use of health care services. More specific questions addressing adequate use given a person's risk status may have been more sensitive to such differences. Barriers to care other than physical access (eg, extent and quality of care) may have played a role in preventing patients with treatable diseases from being informed about their conditions or from taking advantage of appropriate services.

In a previous report, race was also strongly associated with low vision. Blacks had an age-adjusted twofold excess prevalence relative to whites.⁵ On adjustment for other socioeconomic variables such as educational level, employment status, and general health status, the relative

prevalence dropped to between 1.2 and 1.5. This suggests that blacks may not be inherently at higher risk of visual impairment than whites, but that a constellation of other factors associated with visual loss are, in an American urban population, also associated with race. This lack of predisposition to high rates of blindness and visual impairment was expected given the diversity of pathogenic mechanisms that can lead to blindness or visual impairment. The lack of a causal link between race and visual loss does not, however, limit the importance of race as an indicator of high-risk populations in urban America that need additional resources directed to blindness prevention.

This work was supported by grants EY-03605, EY-05091, and RR-04060 from the National Institutes of Health, Bethesda, Md.

The Baltimore Eye Survey Research Group is composed of the following individuals: Alfred Sommer, MD, MHSc, Principal Investigator; James M. Tielsch, PhD, Project Director; Harry Quigley, MD; John Gottsch, MD; Richard Royall, PhD; Joanne Katz, MS; Kathe Witt, COMT; Kuldev Singh, MD; and Jonathan Javitt, MD, from The Johns Hopkins University; and Sandi Ezrine, MS, from Survey Research Associates, Inc.

References

1. Roberts J, Lundford J. National Center for Health Statistics: monocular visual acuity of persons 4-74 years, United States, 1971-1972. *Vital and Health Statistics*. Washington, DC: Public Health Service; 1977. US Dept of Health, Education, and Welfare publication (HRA) 77-1646; series 11, no. 201.
2. Kahn HA, Moorhead HB. *Statistics on Blindness in the Model Reporting Area, 1969-1970*. Washington, DC: Public Health Service; 1973. Office of Biometry and Epidemiology, National Eye Institute, US Dept of Health, Education, and Welfare publication (NIH) 73-427.
3. Leibowitz HM, Krueger DE, Maunder LR, et al. The Framingham Eye Study monograph. *Surv Ophthalmol*. 1980;24(suppl):335-610.
4. Kirchner C, Peterson R. The latest data on visual disability from NCHS. *J Vis Impair Blind*. 1979;73:151-153.
5. Tielsch JM, Sommer A, Witt K, Katz J, Royall RM, Baltimore Eye Survey Research Group. Blindness and visual impairment in an American urban population: the Baltimore Eye Survey. *Arch Ophthalmol*. 1990;108:286-290.
6. Ferris FL, Kassoff A, Bresnick GH, Bailey I. New visual acuity charts for clinical research. *Am J Ophthalmol*. 1982;94:91-96.
7. Ferris FL, Sperduto RD. Standardized illumination for visual acuity testing in clinical research. *Am J Ophthalmol*. 1982;94:97-98.
8. Draper N, Smith H. *Applied Regression Analysis*. 2nd ed. New York, NY: John Wiley & Sons Inc; 1981.
9. Bureau of the Census, US Dept of Commerce. *1980 Census of Population and Housing, Census Tract, Baltimore, Md, Standard Metropolitan Statistical Area, PHC80-2-82*. Washington, DC: US Government Printing Office; 1983.
10. Kirchner C, Peterson R. Worktime, occupational status, and annual earnings: an assessment of underemployment. In: Kirchner C, ed. *Data on Blindness and Visual Impairment in the U.S.* 2nd ed. New York, NY: American Foundation for the Blind; 1988.

SightFirst: Lions Conquering Blindness

Julie Foreman, MS

Oak Brook, Ill. —The Lions Clubs International have launched their attack on preventable and reversible blindness with SightFirst, one of the most comprehensive and far-reaching blindness prevention programs ever undertaken by a volunteer service organization.

There are 40 million blind people in the world today, and it is estimated that, in 25 years, that number will double. Eighty percent of this current blindness could have been prevented or can be cured. The Lions Clubs International have accepted the challenge of bringing blindness under control on a global scale.

The Lions Clubs International has been associated with fighting blindness since 1925, when Helen Keller called on the Lions to become "Knights of the Blind." Since that time they have saved the sight of millions. Now, going a step further, the Lions have designed a program to dramatically reduce the incidence and prevalence of preventable and curable blindness.

SightFirst seeks to remedy blindness by providing quality eye care delivery systems to millions who suffer blindness needlessly. The targeted causes of preventable and curable blindness are cataract, glaucoma, diabetic retinopathy, onchocerciasis, trachoma, and xerophthalmia. The projects will focus on developing health care infrastructures and eye care delivery systems in countries where blindness is endemic. Ninety percent of those persons losing sight live in developing countries. Therefore, the first eight projects are planned for Latin America.

The SightFirst projects will be conducted on national or district levels within countries under the guidance of a technical adviser. The technical advisers will be ophthalmologists employed by the Lions Clubs International to help local Lions determine the causes and prevalence of blindness in their region. The advisers will assist in designing a SightFirst project and ensure that the project coincides with the national blindness prevention program of that country, as well as following the SightFirst guidelines. The advisers will also see that the projects employ appropriate technology, do not duplicate existing efforts to prevent and cure blindness, and are able to continue operating beyond the life of Lions' direct involvement.

The blindness prevention strategies adopted by the Lions for their SightFirst project are:

- To develop and/or strengthen the primary care infrastructure. SightFirst projects will build eye care hospitals, establish rural clinics, and provide mobile eye care units to serve remote communities.

- To develop manpower and managerial skills. SightFirst projects will provide fully trained ophthalmologists, eye care auxiliaries, and surgical assistants as well as provide basic eye care training to community health care workers.

- To promote community mobilization. The key to blindness prevention is public education and awareness of the threat of blinding diseases, such as glaucoma and diabetic retinopathy. All SightFirst projects will promote the importance of regular eye examinations and preventive eye care practices.

- To further operations research. SightFirst projects will compile vital information that will enable future programs to determine the effectiveness of different blindness prevention models.

The anticipated cost of the program is \$100 million and is to be funded primarily through the Lions Clubs International Foundation. Additional funds are being provided by corporations and foundations in many areas of the world. SightFirst grants will be awarded to Lions Clubs organized on a national level to fund projects that address the specific eye care needs of that region. The program is to be implemented over a 6-year period.

The idea for SightFirst came about in 1988, when the Long Range Planning Committee of Lions Clubs International began to explore how the organization could make the greatest impact in humanitarian service. The committee selected reducing blindness on a greater level as the goal. In March 1989, Lions Clubs International began to establish a global blindness prevention effort. The first eight projects are now in the planning stages.

Along with the immediate benefits of the projects, SightFirst will provide long-term benefits for the fight against blindness, such as reducing the millions of people who have curable forms of blindness, providing a major boost to the worldwide effort to ultimately eradicate preventable blindness, further developing the health care infrastructure of many developing nations, and providing a model for a more effective private/public partnership in delivering health care.

Indigent Patient Care—Then and Now

Loring W. Pratt, MD

Care of the indigent patient was the physician's responsibility and privilege in the 1940s, as it had been for an eternity before. Every physician recognized his responsibility to provide this care and donated one half day or one whole day a week to the care of these patients. The care that the patients received was generally excellent and, in some instances, better than that provided for the paying patient. Often an effort was made to contain the expense of the patient with medium income so that he did not receive the generous laboratory testing and diagnostic workup, which was freely accorded to both the indigent and the wealthy. The patient's contribution was to provide an opportunity for medical students and residents to learn the rudiments of medicine and patient care from their illnesses.

In cities, there were large hospital clinics, for the purpose of caring for indigents, staffed by the same physicians who cared for the general hospital population. Often these were identified as "resident clinics," and the resident staff of the hospital managed the patients under the watchful eye of the "visiting staff." These patients were the so-called teaching patients and, thus, they received the very best of everything available for care. The visiting staff physician's privilege to admit patients to the hospital was dependent on his performance and regular attendance at clinics to which he was assigned.

In those days, there were two schools of thought in patient management as far as laboratory testing was concerned. The most popular school was to obtain results from all of the possibly useful tests. These tests were done in a logical fashion, over the course of a few days, new tests being ordered in a logical progression on the basis of the results of testing already done. The physician who ordered a large battery of tests on admission and had all the data to sort from was decried as a "shotgun" physician. The second school applied Occam's Razor and ordered only those tests deemed necessary to make the diagnosis. In teaching institutions, and in dealing with indigent patients, this was not considered to be a desirable practice. The young physicians were encouraged to take the same sort of thoughtful approach that they would want for themselves and to request all desirable tests, without regard to the expense of the procedures. They were to be overwhelmed by the evidence leading to a particular diagnosis. In the course of their training, they took the cares and problems of their patients to heart and worked diligently to see that they provided top quality care for the patient, and remained unconcerned about the patient's

financial status, except as it affected his ability to cooperate with the prescribed care. Physicians were completely oblivious to the possibility of remuneration from this group of patients.

In the outside world of medical practice, where training programs were not extant, the indigent patient usually was treated in clinics, held at regular intervals, or by the physician in his office at no charge. The indigent status of the patient was often identified by a social worker or friend without the benefit of a means test; and the patient was treated well, kindly, and efficiently by the physician who considered the care of the indigent patient to be a normal part of his medical practice and that it was both his obligation and privilege to care for those less fortunate.

In 1965, Medicaid was passed as an afterthought to Medicare, and thus the government, in its wisdom decreed that no patient shall be thought of as indigent. This was considered to be demeaning to the patient and, therefore, all patients would thereafter be handled as paying patients thereby maintaining their self-esteem. This change in practice has now been in operation for a number of years and in 1991 we are able to see how this program has worked for patients in general. It is of interest to note that even today the only individuals with a constitutional right to medical care are prisoners.

In large cities, resident clinics are still held and patients are seen in the same fashion as in yesteryear under the supervision of visiting or full-time staff. The government pays for their care through Medicare or Medicaid programs; but the allowed fee often does not cover the real cost of the patient's care. Many physicians in these areas will not care for Medicaid or Medicare patients in their offices but refer them to the clinics where such patients are cared for. In many areas, the truly indigent patient finds it difficult, and sometimes impossible, to obtain care because of the complex requirements of governmental bureaucracy and the inadequacy of the allowed fee. Older persons now pay more for their care, in addition to the Medicare allowance, than they previously paid for their total care.

In rural areas, where patients have no clinic to go to, there are now physicians who do not "accept" Medicaid and other indigent patients for care. In the 1940s, they would have lost their hospital admitting privileges had they practiced in this fashion. They say that they cannot afford to take care of these people because the allowed fee for care is below the cost of operating their office.

Another facet of today's problem is the cost imposed by third party payers. Under the diagnosis related group program, fixed fees for different types of care are allowed by the government. It is often the case that the fee allowed is inadequate and the amount of time allowed for hospi-

Accepted for publication February 26, 1991.

Dr Pratt is in private practice in Fairfield, Me.

Reprinted from *Archives of Otolaryngology—Head & Neck Surgery* (1991;117:484-485).

talization is likewise inadequate. When a hospital finds that a particular type of illness costs them more than they receive from their third party payer, they proscribe the treatment of such patients within their hospital and insist that they be referred to a more sophisticated hospital for care. This sort of patient "dumping" has occurred in both rural and metropolitan areas, and it is practiced subtly today by some physicians within their own practice spheres.

Change in the physician's attitude from considering it a responsibility and a privilege to care for the indigent patient to the present state where such care is readily avail-

able only if it is to be paid for and delivered by a physician who is often discontent with the monetary allowance, has made a major inroad on the care of the indigent, and has in the same fashion weakened the physician-patient bond. This change has resulted from payment plans that have been forced on the physician by governmental and other third party agencies. It is likely that this erosion of trust has been a contributing factor in the increasing litigious nature of the population at large. Perhaps the time has come to turn the clock back!

Indigent Care—Now

Neil O. Ward, MD

Dr Pratt has shared with us indigent care experiences from the past; but it is the description of a foreign land to which we "cannot go home again."

Today we have a larger population of older patients, improved but expensive technology, substance abuse, acquired immunodeficiency syndrome, aggressive business practices, liability concerns, and governmental regulation beyond the dreams of even the most imaginative bureaucrats of yesteryear. The Health and Human Services Secretary, Louis Sullivan, pointed out that health outlays by all public and private sources have been rising faster than general inflation for years (*Washington Post*, November 1990). The resulting high cost of health care has created unprecedented pressures on the methods of delivery.

Much has been written about the needs of our medically indigent patients, and locally some recommended remedies have been put to the test. Arizona is the only state in the Union that does not have a Medicaid program based on fee-for-service indemnification. In 1982, the Arizona Legislature opted for a capitated, prepaid plan, called the Arizona Health Care Cost Containment System (AHCCCS). The AHCCCS contracts with competitively managed care plans; these plans then contract with physicians and hospitals. Potential patients must meet income qualifications, enroll in one of the plans, and visit a contracted provider to receive services.

It may be enlightening to share with you almost a decade of experience in this unique system designed specifically to provide health care for the "poorest of the poor" and to pay for indigent health care services in Arizona. An insurance scheme designed for the medically indigent population has inborn weaknesses. If the best insurance plans spread the risk over the greatest number of citizens, AHCCCS does not qualify as a "best" plan; for it spreads risk over one of the sickest segments of society with a small but significant number of citizens characterized as "non-compliant."

Attracted by the opportunity to serve and by the "up-front payment of premiums," a number of organizations contracted to become AHCCCS providers. Initial financial incentives to discourage "gatekeepers" referrals to specialists have been replaced by preauthorizations and committee reviews. Prepaid capitation for care arguably motivates a few physicians to offer less time and care to patients who represent a fixed monthly payment. There is no legislative cure for greed. Arizona is still in court attempting to retrieve prepayments that resulted in large

profits to a few entrepreneurs and little medical service to citizen subscribers.

The Flinn Foundation is a philanthropic organization established in Phoenix, Ariz, with a stated purpose of obtaining information that will help guide those working to improve the health care system. In 1989, the Flinn Foundation commissioned a major survey of Arizona health by Louis Harris & Associates Inc, New York, NY. Research specialists from the School of Health Administration and Policy at Arizona State University, Tempe, provided assistance.¹

The progress report on AHCCCS revealed that 53% of adults currently and formerly enrolled in AHCCCS experienced easier access to their AHCCCS provider compared with their previous provider. One might have expected an even higher percentage of easier access given the plan design of "farming out" health care from overcrowded county clinics to local physicians' offices.

Only 46% of currently and formerly enrolled adult patients assessed their care as "better" under AHCCCS, although 58% were "completely satisfied." Patient satisfaction is an important component of imperfectly defined "quality care."

The AHCCCS (and military) patients had the highest utilization of Arizona emergency departments and the second highest rate of hospitalization (after Medicare) when compared with all other insureds and noninsureds. High utilization and higher costs should be anticipated in the sickest segment of society.

Patient outcomes are of greater significance to the clinical otolaryngologist concerned with quality of care issues. Information is available from the Flinn Foundation report: *The Health of Arizona's School Children*.² When compared with other insurances and uninsureds, AHCCCS children have the highest incidence of ear infections detected by school nurse examinations of 1419 kindergarten and 1258 fifth-grade students.

The long-term effects of hearing loss associated with untreated otitis media are well documented in our English-language literature. These effects are not limited to individual disability but include societal losses related to behavioral problems, educational deficits, and economic drains. Analysis by an otolaryngologist of over 20 000 school nurse visits over a 2-year period shows that AHCCCS children appear to have a higher incidence of upper respiratory infections but, more importantly, are the least likely to be receiving medication dispensed by the school nurse!

Are the incentives in the AHCCCS program working to withhold treatment? Is it too difficult to get to an AHCCCS provider? Are AHCCCS providers unaware of the value of treating ear problems associated with upper respiratory

Accepted for publication February 5, 1991.

Dr Ward is in private practice in Phoenix, Ariz.

Reprinted from *Archives of Otolaryngology—Head & Neck Surgery* (1991;117:486-487).

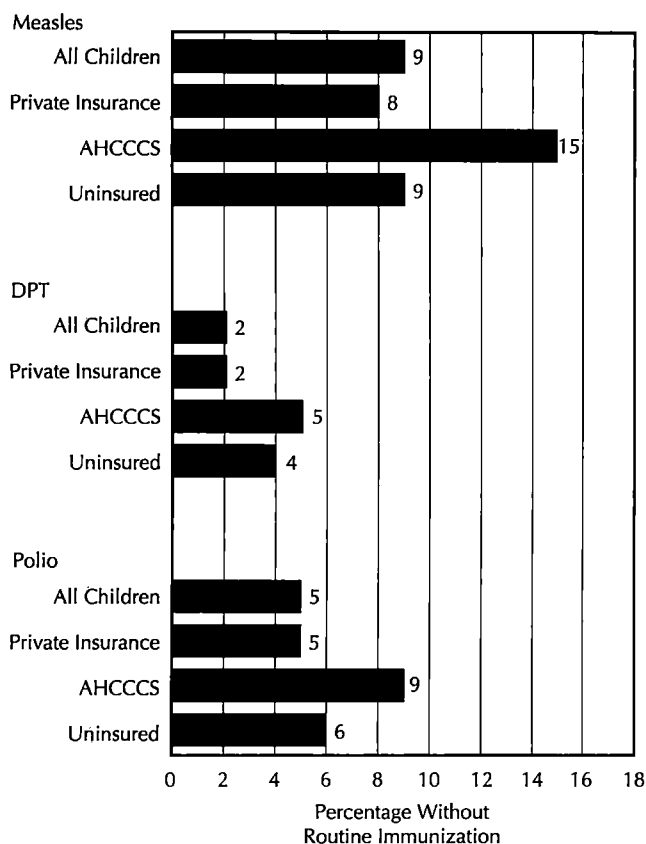


Fig 1.—Percentage of Arizona school children without routine immunization, by insurance status.² AHCCCS indicates Arizona Health Care Cost Containment System; DPT, diphtheria, pertussis, and tetanus.

infections? Are parents willing to hurdle the hassle of AHCCCS enrollment but indifferent to, or ignorant of, the needs of their children? Figure 1 suggests parental indifference to, or irresponsibility for, obtaining available routine immunizations for AHCCCS children.

A striking correlation between poor health (as measured by the number of visits to the school nurse) and scholastic performance is demonstrated in Fig 2. The more frequently a child visits the school nurse, the poorer the performance on standardized tests. It has been documented that citizens are more likely to be unhealthy—and without health insurance—if they have not attained a high school education.¹ Where do we break the cycle of poor health leading to inadequate education leading to low incomes leading to no health insurance leading to poor health?

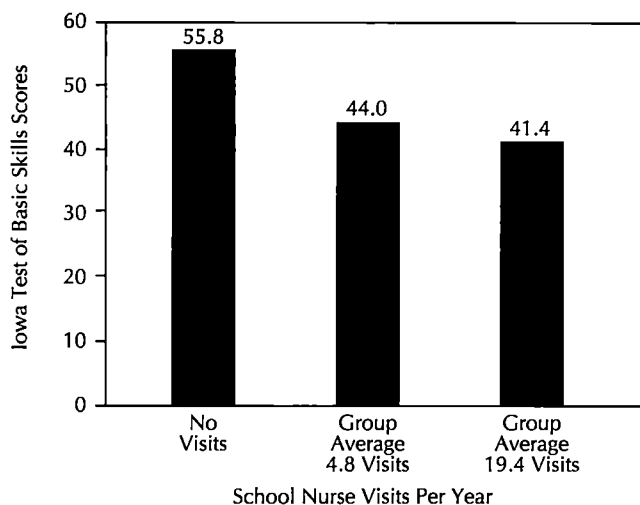


Fig 2.—Poor performance correlates with frequent nurse visits.²

Well-meaning and altruistic social engineers who are designing the utopia in which we will live and work tomorrow need all the help they can get! We are faced with a complex problem that will not be solved by importing simple solutions like another country's health system. To expect a new system or financing mechanism to solve our health care needs is to ignore recent and profound changes in personal behavior, family structure, economic priorities, and technological choices. In our many-faceted society, there is an interface on which each of us should reflect. Some of us can provide "free" care to the needy; all of us can teach good health habits and the importance of compliance with proven medical regimens; we can work to reduce the expense of professional liability; we can define appropriate and cost-effective treatment; we can identify and retrain (if not restrain) profiteers in our profession; and we can participate in coalitions to develop policy recommendations.³

The brilliance of America is in the opportunity to act on ideas and to accommodate diversity. The solution to our problem is not here yet, but it is evolving. Your participation in the process is vital for the future. When nothing is certain, anything is possible.

References

1. *Health Care in Arizona: A Profile*. Phoenix, Ariz: The Flinn Foundation; 1989.
2. Surveys by Louis Harris & Associates and UCLA School of Medicine. *The Health of Arizona's School Children*. Phoenix, Ariz: The Flinn Foundation; 1986 and 1987.
3. Politser P. America's uninsured: some proposed solutions. *Am Coll Surg Bull*. 1990;75:11-18.

Who Ought to Get Decent Health Care?

Ronald A. Carson, PhD

Ought belongs to the vocabulary of ethics. It specifies responsible action. To say that one ought to do something implies that one is duty bound to do it. It is not optional but obligatory. Failure to do what one ought to do is an abrogation of responsibility.

This being so, the answer to the question that titles this essay seems obvious. Surely everyone has decent health care coming, but who is "everyone"? Everyone who *wants* it, whether or not they need it? Everyone who *needs* it, irrespective of their ability to pay for it? And what constitutes decent health care? Preventive care, catastrophic care, long-term care? The ethical question as to who ought to get decent health care is a complicated one.

A system of health care provision is made up of several crucial features, notably quality, cost, and access. In keeping with the theme of this issue of the *ARCHIVES*, this essay focuses on the element of access to health care services. Who has access to which services, and in what measure? Who gets left out, and why?

Public attitudes toward the American health care system are changing dramatically. Americans who have ready access to health care are increasingly critical of the US health system. A recent opinion survey reports that "A striking 89% of Americans see the US health care system as requiring fundamental change in its direction and structure. Only 10% see their health care arrangements as working reasonably well."¹ Such studies do not take into account the views of those whose access to the system is limited or altogether barred by their inability to pay for health care services. It is safe to surmise that these disenfranchised citizens too would support changes in the mechanisms of access that would make needed services available to them and their families.

The uninsured have long been among us, but their inability to get needed care caused concern among physicians and legislators alike. Throughout the 1970s, approximately 25 million people lacked health insurance and, therefore, had diminished access to services.² But many of these people were cared for by physicians who carried on a venerable tradition of professional charity and by hospitals that shifted the costs of uncompensated care to insured patients. In the 1980s, these two responses began to change. Prospective payment systems and managed care plans were introduced with such mechanisms as preadmission certification, utilization review, and capitation arrangements. Consequently, the rapid rise in hospital costs has been considerably slowed, notably by moving many inpatient diagnostic and surgical procedures to

ambulatory settings. Cost-shifting has also been curtailed with the result that Americans who have no health insurance cannot get into the system and those who are inadequately insured cannot get the care they need. The number of those citizens has grown by half since the 1970s to 37 million, 12 million of whom are children.

Over the past decade, with the emergence of for-profit enterprises and the centralizing of health care organizations to provide comprehensive services, commercial values have come into competition with the value of service that has traditionally been the hallmark of medical care. In the process, whether as consequence or corollary, the profession's charitable impulses have become noticeably less robust. Many individual physicians continue to provide a share of care where it is needed, irrespective of how it is to be paid for, but as public financing programs are squeezed and insurance companies strip down health plans for clients who represent bad risks to business, physicians become more concerned about inadequate levels of reimbursement and mounting paperwork.³ Such concerns are legitimate, but they pale in significance when compared with the needs of sick people for adequate medical care. Legitimate or not, when such concerns become complaints, ordinary people begin to question the profession's commitment to care. If the profession is perceived to be equivocating on that fundamental commitment, the trust that sustains the healing relationship is likely to erode.

What can be done to improve access to decent health care for those who need it? Under the nation's Medicaid program, the federal government pays 40% to 60% of medical expenses and the states pay the rest. This program covers about 26 million people, less than half of those who need its services, a disproportionate number of whom reside in states with weak tax bases and high concentrations of poor people.⁴ Young poor people and old poor people unwittingly compete for funds. Only one in every three poor women of childbearing age is covered by Medicaid. Seventy percent of Medicaid's eligible population consists of low-income families with children, and yet only 25% of the Medicaid budget is expended to assist them. Almost half of Medicaid expenditures are devoted to long-term care, primarily for the elderly because no other program finances long-term care.⁵

A 1986 survey found that 15 million Americans encountered barriers to health care for financial reasons. Eight million people with chronic or serious illness put off seeking care when it was needed, and one million people were denied care because they could not pay for it.⁶ Physicians cannot solve this aspect of the access problem alone, but taking care of patients insured by Medicaid and accepting Medicaid reimbursement as payment in full would directly and immediately improve access for the needy.

Accepted for publication March 11, 1991.

From the University of Texas Medical Branch, Galveston.

Reprinted from *Archives of Otolaryngology-Head & Neck Surgery* (1991;117:496-497).

Two recent studies show that a patient's ability to pay also makes a difference in that person's treatment after admission to a hospital. Uninsured patients tend to enter the hospital sicker than insured patients, but they receive fewer diagnostic tests and are released sooner than insured patients. They are also far less likely to undergo high-cost procedures. One study found that hip replacements were 45% less likely and coronary bypass surgery 29% less likely to be done on uninsured patients.⁷ In another study, researchers found that privately insured patients were 80% more likely to receive angiography and 28% more likely to undergo angioplasty than their uninsured compatriots.⁸ Clearly, financial considerations have intruded on the doctor-patient relationship and are compromising the value of fairness.

Despite the fact that Medicare and Medicaid pay for one third of the nation's hospital expenditures, there are significant gaps and costly exceptions in coverage. An increasing proportion of the cost of health care for people over 65 years old is paid out-of-pocket.⁹ Consequently, elderly people who cannot afford private insurance to supplement Medicare and are not poor enough to be eligible for Medicaid put off going to the doctor until they are too sick not to. Although the policy of fixed advance payments to hospitals is based on diagnosis-related costs, the policy has caused an increase in expense to nursing homes, home-health agencies, and families caring for frail elderly members at home. Physicians can help here too, by making house calls as occasions warrant and by charging patients on an equitable sliding scale according to their ability to pay.

Nearly a third of the annual Medicare budget is spent in the final year of patients' lives, much of it in intensive last-ditch efforts to resist death a little longer. We desperately need policies regarding what "rescue treatments" it is reasonable to offer very sick people. It goes without saying that these vulnerable people should have the best of care. Open to question is what that care should consist of, in particular, how much death-defying care is medically reasonable and humanly desirable.

To offer patients useless treatment is bad medicine. With more and more treatment modalities available, the following question arises: Are physicians obligated to offer marginally beneficial treatments? This prompts an additional question: Marginally beneficial relative to what? If the answer is: Relative to the human cost likely to be borne by the patient, we are dealing with a question of clinical

judgment that is the very *métier* of physicians.¹⁰ If, instead, the answer is: Relative to dollar costs, then a policy determination is required. Experienced physicians have valuable first-hand knowledge of the benefits and burdens of the techniques and treatments at their disposal. Such knowledge can influence policy discussions regarding the justifiable limits of treatment recommendations for which the expected human benefits are small relative to dollar costs.¹¹ But it is important that clinical judgment and social judgment be sharply distinguished, especially when they are rendered by one and the same person. Otherwise, individual patient care is likely to be corrupted by social necessity.

The hue and cry about setting limits to services and containing costs has obscured the question Americans worried about until the early 1980s: How can we ensure every citizen access to a limited but fair system of health care provision adequate to his or her need? If we can set our compass on this fixed point of social conscience, we will be able to steer a straighter course. The sailing may not be smooth, but the winds of profit and loss will no longer buffet us. Instead, they will follow in the wake of care.

References

1. Blendon RJ. The public's view of the future of health care. *JAMA*. 1988;259:3587-3593.
2. Congressional Budget Office. *Profile of Health Care Coverage: The Haves and Have-Nots: Background Paper*. Washington, DC: US Congressional Budget Office; March 1979.
3. 25% of all office based physicians accept no Medicaid patients: Medicaid mill: fact or fiction. *Health Care Financ Rev*. 1980;2:37-49.
4. Blendon RJ. What should be done about the uninsured poor? *JAMA*. 1988;260:3176-3177.
5. Mechanic D. Challenges in long-term care policy. *Health Aff (Millwood)*. 1987;6:22-33.
6. *Access to Health Care in the United States: Results of a 1986 Survey*. Princeton, NJ: Robert Wood Johnson Foundation; November 1987. Report 2.
7. Hadley J, Steinberg EP, Feder J. Comparison of uninsured and privately insured hospital patients. *JAMA*. 1991;265:374-379.
8. Wenneker MB, Weissman JS, Epstein AM. The association of payer with utilization of cardiac procedures in Massachusetts. *JAMA*. 1990;264:1255-1260.
9. Health Care Financing Administration. *Annu Rep*. 1987.
10. Bone RC, Rackow EC, Weg JC, et al. Ethical and moral guidelines for the initiation, continuation, and withdrawal of intensive care. *Chest*. 1990;97:949-958.
11. Roper WL, Winkenwerder W, Hachbarth GM, et al. Effectiveness in health care. *N Engl J Med*. 1988;319:1197-1202.

The Canadian Health Care System

Patrick J. Doyle, MD

Is Canada's the best health care system in the world? The majority of Canadians believe that it is. The system was designed to provide equal access to medical and hospital services for all Canadians and to ensure that no one was financially ruined by illness. The plan may have fulfilled this role as nearly as it is possible to do so, but it is far from perfect.

I have practiced in Canada prior to and since the introduction of Medicare, and I also have practiced in the United States. Many of the problems one faces as a practicing otolaryngologist-head and neck surgeon are similar, particularly as the administrative bureaucracy in the United States catches, and in some ways, passes their Canadian counterpart.

There is no difference between the quality of facilities and medical expertise available in Canada and the United States. Medical and paramedical personnel have identical training, ability, and dedication. Hospitals and diagnostic facilities are "state of the art" in both countries.

There is another common denominator between health care in Canada and the United States. Neither country can afford to provide the ultimate in health care to all of their citizens by means of a universal health care system.

Is there a way to provide equal access to all members of society? Is there any way to do this *and* provide the highest quality care in all instances? In my opinion, the answer to both of these questions is no. Health care is expensive. The budget for medical care for three million people in the Province of British Columbia is over five billion dollars.

This money is derived from a combination of monthly premiums and taxation. Unfortunately, there is a significant shortfall in the money required to provide quick and easy access to all services. Universal health care results in overutilization. Both the public and the medical profession are responsible for this, and it is particularly noticeable in the use of special diagnostic procedures such as computed tomographic scanning and magnetic resonance imaging. This overutilization places a strain on the system and results in serious delays for urgent diagnostic procedures.

Patients, particularly those with medical problems, are kept in the hospital longer than necessary. Since the patients have no responsibility for the cost of hospital services, they do not object to the longer stay. This places a premium on hospital beds for acute illness and inpatient surgery. Operating room time is restricted because of high costs. Long waiting lists for elective surgery are the rule rather than the exception.

The budget simply cannot handle an unlimited number or unlimited quality of patient care. To stay within the

budget, it is necessary to limit access to the facilities. This is done by refusing to increase the funding for hospitals, diagnostic facilities, and physicians.

Each hospital is provided with a global budget. It is the responsibility of the hospital to decide which services it can provide while living within its budget. A global budget is also provided for medical services. Physicians bill on a fee-for-service basis, but it is the responsibility of the medical association to set a fee schedule that will keep total cost within the budget. Each specialty must negotiate with the medical association to set the schedule. Extra billing, beyond the schedule of fees, is illegal.

Since access is limited, who suffers? In my opinion, the middle-income group suffer.

Equal access is the number one argument in favor of Medicare. Theoretically, we have provided equal access in Canada, but in fact, we have not.

Only the very naive can believe that a politician, a physician, or a person with physician and hospital administration friends must line up for care. Patients with such influence are able to move to the front of the line for office visits, hospital beds, surgery, or diagnostic procedures. This does not differ from the pre-Medicare era, but what is different is that these privileged people do not pay an additional fee for the red carpet service. The rest of the population, the average-wage earner, the poor, and the elderly are treated equally. They do all the waiting. The Canadian Medicare plan is a good arrangement for the privileged and the poor. The privileged obtain care at minimal cost; the poor obtain care otherwise not available. It is less satisfactory for the average-wage earner who pays handsomely for his care and a large portion of the care provided to the other groups.

Universal health care in Canada is here to stay. It is neither all good nor all bad. Some changes would result in immediate improvement at reduced cost. Individuals above a certain income should be required to provide their own private insurance. The argument that this would create a two-tiered system is not valid since one group already receives red carpet treatment. The small percentage of physicians and patients guilty of over-utilization creates a major problem that is correctable. More effort must be put into preventive medicine because a successful preventive medicine program is the only way to keep the costs of acute and chronic care within reasonable bounds.

When universal Medicare was brought in, the politicians told us that "everyone deserves the best possible care." Now that they have found that is impossible, they say, "everyone deserves average care." Average care is not good enough. Excellent care for all is possible if the tax dollars are spent wisely to provide care for those who cannot afford to provide their own and if the health of the nation is improved through a comprehensive program of preventive medicine.

Accepted for publication March 17, 1991.

From St Paul's Hospital, University of British Columbia Medical Center, Vancouver.

Reprinted from *Archives of Otolaryngology-Head & Neck Surgery* (1991;117:495).

Access to Trauma Care

The Los Angeles County Trauma System: A Case History

Dale H. Rice, MD

Trauma is the leading cause of death among people aged between 1 and 38 years, and it is the third leading cause of death in people of all ages. Over 150 000 deaths and 350 000 permanent disablements occur each year in the United States as a result of accidents, suicides, and homicides. In 1982 alone, trauma is estimated to have cost the United States over 60 billion dollars, with one third attributed to treatment costs and the remaining to lost earnings. Since trauma primarily affects younger people in the earlier stages of their productive work years, it exacts a higher cost in terms of lost years of potential than that of cardiovascular disease and cancer combined. In California, two thirds of all trauma patients are involved in "blunt" trauma, usually from highway-related traffic accidents. The remaining third are involved in penetrating trauma. The trauma milieu is defined by the American College of Surgeons as "a life threatening injury or series of injuries that requires immediate surgical intervention if the patient is to survive." The County of Los Angeles Department of Health Services has offered the following definition of the trauma patient: "critical trauma patients include, but are not limited to, those with major blood loss, and/or shock, severe cardiac or respiratory distress, blunt or penetrating wounds to the trunk, head, neck or spine requiring prompt surgical intervention."

In previous times, the concept of trauma care had long been associated with war. During the Napoleonic Wars, the French Army, recognizing the importance of reducing the time between injury and surgical treatment, developed the flying ambulance. The high survival rate from operative amputations was considered a major breakthrough for that period. The US Army's Military Air Service Hospital units are similar examples of military trauma care facilities. Improvements in US military and field hospitals and blood transfusion systems resulted in soldier mortality rates declining from 4.5% of live arrivals in World War II, to under 2% in the Vietnam War.

THE CONCEPT

In 1983, the Los Angeles County (California) Department of Health Services began implementing the current trauma care system, which was approved by the County Board of Supervisors. Participating hospitals would agree to participate in the trauma care system, including paying an annual fee of \$15 000. The annual fee has since varied

between \$15 000 and \$34 400. All 96 hospitals in Los Angeles County, with basic emergency service and a physician on duty 24 hours per day, were approached regarding interest in opening a trauma center. The Department of Health Services required hospitals interested in establishing trauma centers to meet criteria for being classified as a level one, level two, or rural trauma facility. Initial hospital response was positive. Between December 1983 and July 1986, 23 hospitals opened trauma centers with County designations of level one, level two, or rural. Trauma centers in Los Angeles County were designated as level one, level two, or rural, according to trauma criteria for designation established by the County Board of Supervisors. In addition to exceeding the requirements of emergency department care, all County designated trauma centers require both a general surgeon and an anesthesiologist to be in-house, and immediately available, 24 hours per day. Further, trauma centers must have the following services: clinical laboratory, surgical service, basic emergency service, intensive care unit, pediatric care; and the following capabilities: acute hemodialysis, acute spinal cord injury management, and programs for quality assurance.

The County Board of Supervisors had a clear vision and direction for County-wide trauma care when it originally formulated the County trauma system. There was a broad consensus to support the trauma system at both County and State levels, and private hospitals eagerly participated in the system because they had financial and other incentives. The original vision for the trauma system received wide support as a program not requiring heavy governmental funding, as it was originally felt that trauma centers would break even or make money through two mechanisms. The first was to balance the catchment areas so that a significant percentage of patients would be expected to be covered by third party payers. The second was to cost shift between those covered by third party payers and those not covered. Two unanticipated factors unraveled this plan. The first was the development of the 20-minute transport rule (see below) that prevented the design of balanced catchment areas. The second was diagnosis related groups that effectively prohibited cost shifting.

THE BEGINNING

The original Los Angeles County trauma care network was based on the "golden hour" concept, in which definitive surgical services could be provided to a trauma patient within the critical first 60 minutes after injury. Trauma center locations were selected strategically to minimize paramedic ambulance transit time from most areas

Accepted for publication February 26, 1991.
From the University of Southern California School of Medicine, Los Angeles.
Reprinted from *Archives of Otolaryngology-Head & Neck Surgery* (1991;117:493-494).

of the County to nearby trauma centers. In Los Angeles, the majority of paramedic ambulance services are provided by fire departments. The fire departments initially were reluctant to have paramedic personnel and equipment venture out of their primary areas of service for extended periods. A concern existed that they would not then be available to respond to the next emergency call. Thus, a compromise was reached, whereby paramedics could venture from their stations to the extent that nearby trauma victims could be transported to a trauma center within 20 minutes. This became a basis for establishing the trauma care network. In addition to paramedics and ground transportation, air ambulance helicopters were available. However, because of the difficulty of landing near busy roadways, and developed residential areas, most air ambulance helicopters were used for interhospital transport of patients rather than for initial delivery of trauma patients to available trauma centers. For most urban areas of Los Angeles County, automobile ambulance transport was both quicker and more cost effective than air ambulance helicopters. The current cost for air ambulance helicopter services is approximately \$2000 per trip. At its height, the system had 23 trauma centers: 10 Level One, nine Level Two, and four Rural. Three of the 10 Level One centers were County Hospital facilities, and they saw the largest number of patients by far. The County emergency medical services system responded to approximately 420 000 calls in 1986. Of that number, 11 456 were identified as trauma victims and were transported to trauma centers. The number of trauma patients grew steadily, and, in 1988, over 14 000 trauma patients were treated.

SUBSEQUENT EVENTS

When the trauma care network was originally proposed, hospital boards of private hospitals enthusiastically embraced the concept of trauma care. Trauma centers were viewed not only as a potentially significant revenue generator, but also as a powerful marketing tool to attract a wider patient market. Other perceived benefits to a private hospital for having a trauma center included the following: (1) offering trauma care saves lives, an important element of the hospital's overall mission or purpose; (2) it generates good will in the community; (3) the center could be used as a loss leader marketing tool with the anticipation that the value of overall benefits might exceed actual trauma care costs; (4) the existence of a trauma center could make a hospital more attractive to those concerned about emergencies; (5) hospitals could gain the reputation of providing full service care; and (6) teaching hospitals could attract better house officers for training.

Some of these assumptions were erroneous. Data provided by the Hospital Council of Southern California indicate that among 12 private hospitals surveyed, the average loss per trauma patient was \$11 514 for those

covered under MediCal (California's Medicaid program) and \$4230 among those classified as cash patients. Seven of the nine hospitals that subsequently withdrew from the County trauma system cited economic reasons for their withdrawal. Economic considerations include cost of staffing, inadequate MediCal reimbursement, and the inability of some patients to pay for medical service. The year 1987 was the one of greatest attrition, with five of the hospitals withdrawing in that year alone. The first hospital to drop out, located in a particularly urban area, anticipated the next year's losses to be in excess of five million dollars. Another large hospital withdrew after 3 years of participation when it realized that 45% of its patients were indigent and the hospital was losing about two million dollars per year. Another hospital cited 55% as nonpaying, with a similar annual two million dollar loss.

With the withdrawal of these hospitals, a significant portion of people in Los Angeles were not within the designated 20-minute distance to a trauma center. This included portions of West County, the Eastern San Gabriel Valley, communities in the vicinity of Los Angeles International Airport, and East San Fernando Valley. In addition, access from the Antelope Valley, mountainous areas, and Catalina Island to a designated trauma hospital is dependent on the availability of helicopter transport. It is estimated that 2.5 million of the 10 million residents are no longer within 20 minutes of a trauma center. Another problem is that as the number of trauma patients grows, the number of *nonpaying patients* increases and is concentrated in a smaller number of centers. In 1988, approximately 14 000 trauma patients were seen in the 16 remaining trauma centers. That is a 22% increase in the number of patients over 3 years, with a 40% decrease in the number of centers.

CONCLUSION

While many small steps might be taken to improve the existing system, the main continuing problem is that of funding. Additional State and County funding will be necessary to maintain and sustain an adequate trauma system. Some obvious revenue sources present themselves. Since the majority of trauma cases are automobile related, vehicle taxes, gasoline taxes, or automobile insurance recovery offer additional revenue. Other more general remedies might be taken, such as sales taxes, taxes on beer and wine, universal mandated health insurance, or creation of a special assessment for the sole purpose of emergency medical services enhancement. Some additional funding has recently become available from Tobacco Tax Initiative, which will be distributed to the remaining hospitals in this system. It is hoped that additional funding will be provided in the near future so that trauma patients in Los Angeles County will have rapid access to the emergency trauma care, which they need.

Preserving Access With Dignity for the Elderly

Tulsa's VIP Program

John G. Campbell, MD, Rollie E. Rhodes, Jr, MD

There is an escalating trend toward federal- and state-legislated Medicare mandatory assignment. Already, six states have mandatory assignment regulations and similar laws are pending in 12 to 15 more states. In Oklahoma, although only 36% of the medical doctors are participating physicians, we voluntarily accepted assignment of benefits on 70% of Part B Medicare claims in 1990. Believing that voluntary agreements are preferable to governmental edicts, the Very Important Person (VIP) program was established in 1986 by the Tulsa (Okla) County Medical Society. It has since been adopted by the Oklahoma State Medical Association and received official recognition from the American Medical Association (Chicago, Ill).

When used properly, the VIP program enables physicians to accurately identify individuals who need special consideration in obtaining their medical care because of limited resources. In other words, it serves to differentiate those financially needy Medicare patients from those who are as able as the remainder of the Medicare population to pay for their health care. This program is unique in that it is voluntary on the part of both the Medicare enrollee and the physician. It was designed as a local program to help low-income elderly people, while preserving their dignity.

At the time the VIP program was started, there was a perception that physicians were a major cause of the rising cost of health care. The legislative response was to introduce a program of participating assignment, which was a step toward mandatory assignment and nationalized health regulation. Our response to these events was the development of the voluntary income program. In Oklahoma, this effort was led by one of us (R.E.R.) during his presidency of the Tulsa County Medical Society.

In May 1985, the Tulsa County Medical Society Board of Directors, acting in concert with several authorized groups who work with senior citizens, developed a program to assure the availability of medical care for recipients of the Medicare Health Plan who have limited incomes and for whom the progressively increasing costs of health care had become a formidable burden. Eligibility requirements and forced means testing were concerns addressed by this coalition. Its members judged that information needed regarding income and medical need would have to be provided on a voluntary basis. Consequently, volunteers from senior citizens' organizations helped define the cri-

teria for eligibility. This same group of volunteers was trained to interview and to identify those people who met the established criteria. All administrative costs were borne by the Tulsa County Medical Society. Most of the work was donated by the senior volunteers. There was no fee for enrolling.

Eligibility for the VIP program depends on a person meeting one of three criteria: (1) social security is the only source of income; (2) certified to receive medical care under Medicaid (Title XIX); and (3) total annual income (including spouse and dependent children) is less than \$2000 above the current poverty index. Currently, the Federal Poverty Index Guidelines are \$6280 for a single person and \$8420 for a couple.

One of the key ingredients is that the program certifies the beneficiary outside the physician's office and the certification is done by peers. Thereafter, when a VIP card is presented, Medicare assignment is accepted automatically without the patient's having to ask for special consideration or discuss limited resources. This preserves the dignity of the patient and allows the physician to feel that this patient has been identified as low-income elderly and qualifies as such. Underscoring the uniqueness of this VIP program is that it is voluntary by both the Medicare enrollee and the physician.

Enrollment is completed by filling out and signing a form provided by the Tulsa County Medical Society offices. This form can be received by simply calling the Tulsa County Medical Society administrative offices. The enrollee checks which criterion makes him/her eligible, signs it, and returns it to the Tulsa County Medical Society offices. The enrollee then receives a VIP card (Fig 1), which looks a lot like his/her Medicare card. Physicians enroll by calling the Tulsa County Medical Society and stating a desire to participate in the VIP program. Physicians may display a small sign in their offices to indicate VIP program participation (Fig 2).

Currently, 25% of Oklahoma physicians in over 60% of our 77 counties are VIP participants. Patients needing special consideration can identify and reach participating physicians without undue hardship. In Tulsa County, where this program originated, 40% of the eligible recipients have been certified. No figures are available for the entire state. The American Medical Association's House of Delegates recognized the Oklahoma State Medical Association's resolution regarding the VIP program in June 1988. In the American Medical Association's publication, *Medical Society Programs for Voluntary Acceptance of Medicare Assignment*, November 1988, physicians are encouraged

Accepted for publication February 5, 1991.

The authors are in private practice in Tulsa, Okla.

Reprinted from *Archives of Otolaryngology-Head & Neck Surgery* (1991; 117:488-489).

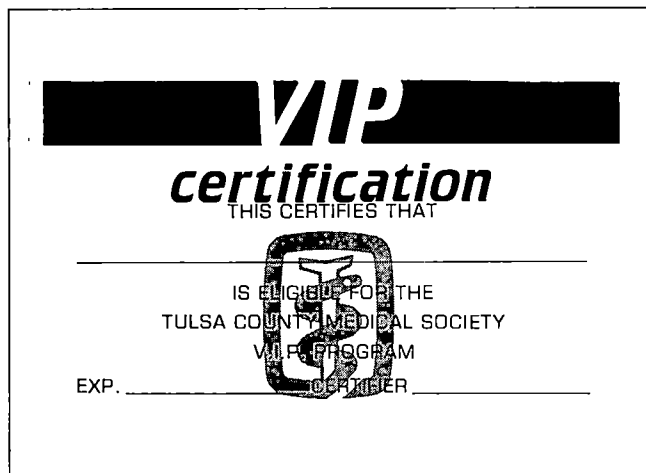


Fig 1.—Card to identify Very Important Person patient.

"to respond to the economic hardship of their Medicare patients" by considering "the financial aspects of the patient on a case-by-case basis," or "to create voluntary programs such as those described in this document."

Features of importance in Oklahoma's program include the following.

1. The VIP-type program counters current and pending legislative efforts to enforce mandatory assignment on all physicians. It is hoped that this evidence of physicians volunteering to help identify and to treat those truly requiring special consideration will suggest that governmental demands may not be the only, nor the best, way to correct the problem.
2. Truly deserving patients are accurately identified.
3. Patients establish eligibility outside the physician's office with the inclusion of volunteer senior citizens' groups.
4. Patient dignity is preserved during the encounter with the physician and his/her staff.
5. Patients feel comfortable that the extent of the care they are offered is not limited by their financial means.
6. Office staffs save valuable time by recognizing these patients in advance.
7. The uniqueness of this program is that it is voluntary by both the Medicare enrollees and the physicians.

The VIP program is designed to obviate the need for laws requiring that physicians accept mandatory Medicare

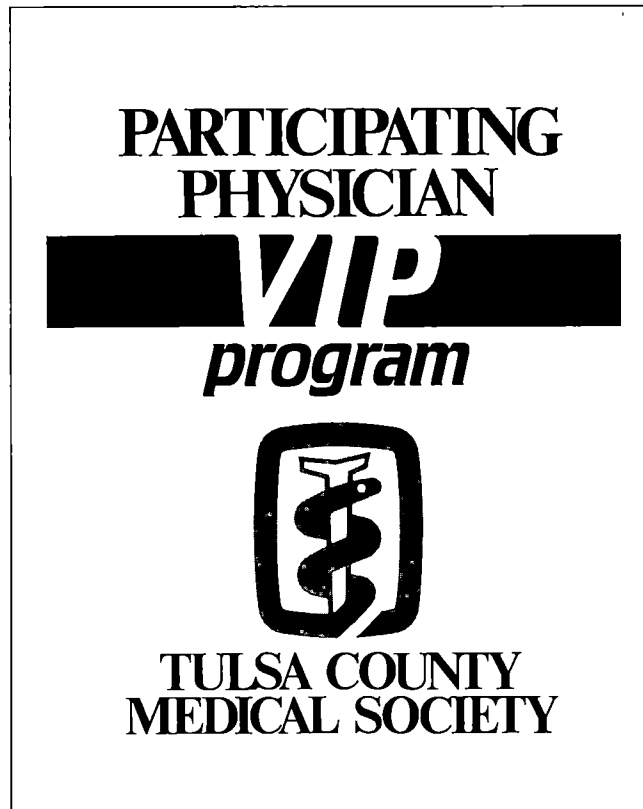


Fig 2.—Sign to identify office of Very Important Person physician.

assignment. However, unless there is greater participation by both physicians and potential enrollees nationwide, as recommended by the American Medical Association, this goal will not be accomplished. The VIP program will only be successful with strong leadership at local, state, and national levels. Local and state organizations will need to market the attributes of this program in concert with the individual physician. It is important that local volunteer senior groups be involved in the development of the program from the beginning. Greater participation will occur as misunderstandings and apprehensions dissipate through increased communication and education of both senior citizens and physician groups. Physicians need to recognize the potential this approach has to avert mandatory assignment legislation.

Access to Care—The Problem for the Uninsured and Underinsured

The View From Washington

Jerome C. Goldstein, MD

The fact that some 30% of the US population is uninsured or underinsured underscores the urgency to address the growing problem of many Americans lacking access to health care. The past year has seen some 15 different proposed plans in Congress to deal with the uninsured, plus the Pepper Commission recommendations. The problem of access to health care involves issues of cost, quality of care, and the hassle factor of burdensome administrative paperwork.

The problem is being addressed both at the Federal and state levels. The only federal regulation that I am aware of that directly concerns access is the "antidumping" regulation passed in 1986. This action was designed to prohibit hospitals from refusing treatment to indigent patients with medical emergencies, including women in labor. Changes effective July 1, 1990, tightened requirements and stiffened penalties. The amended regulation requirements basically state that if a Medicare-participating hospital has an emergency room, it must provide an appropriate medical screening examination to any individual (whether or not eligible for Medicare) who requests an examination or treatment. If it is determined that there is an "emergency medical condition," the hospital must either provide services necessary to stabilize the patient or transfer the patient to another medical facility, in accordance with very specific requirements. "Emergency medical condition" is clearly defined in the regulation. It is specifically stated that "a hospital may not delay the required medical screening examination. . . . or further medical examination and treatment in order to inquire about the individual's method of payment or insurance status." Financial penalties and disqualification from the Medicare program may be imposed on a hospital that violates this statute.

The law also states that if a physician determines that the individual requires the service of a physician listed by the hospital on its list of on-call physicians and notifies the on-call physician, and the on-call physician refuses or fails to appear within a reasonable period of time, and the attending physician orders the transfer of the individual because the physician determines that without the service of the on-call physician, the benefits of a transfer outweigh the risks of transfer. In this situation the transferring phy-

sician shall not be subject to penalty, but the on-call physician, who failed to appear, is.

A physician who knowingly violates the statute may be subject to financial penalties up to \$50 000 for each violation and be barred from Medicare and Medicaid for up to 5 years.

To a large measure, in the absence of Federal initiatives, "it has fallen to the states in the face of severe budget problems of their own challenge" (from *Medicine and Health Perspective*. November 26, 1990). But the working poor are seriously disadvantaged as states tighten their eligibility requirements for Medicaid. These folks are too rich for Medicaid and too poor to afford private insurance, so they have nothing. In general, it can be said that less than half of those below the Federal poverty level qualify for Medicaid benefits. And, because Medicaid payments for services are substantially discounted, the payments slow, and the paperwork burdensome, the Medicaid patient's choices of providers are often limited. "For these and other reasons, the Medicaid program as presently constituted does not offer a viable mechanism for addressing the problem of access for the uninsured."¹

What is happening at the state level? Hawaii's approach is the broadest. Our 50th state has mandated employer coverage since 1974 under its Pre-paid Health Care Act. In 1989, Hawaii created the State Health Insurance Plan to allow families with income as high as 300% of the state poverty line to sign up with participating health insurance plans. The Inter-Governmental Health Policy Project² reports that 6000 residents and 900 providers have boarded State Health Insurance Plan and Employee Retirement Income Security Act of 1974. Challenge may arise. Employee Retirement Income Security Act exempts self-insured companies from state regulation. It took Hawaii 6 years to get an Employee Retirement Income Security Act exemption when sued by an oil firm in 1976. With about 95% of the population currently having some type of health insurance, Hawaii is believed to have the fewest number of uninsured residents. This is basically a mandated employer-subsidized health insurance for most employees working at least 20 hours a week.

In 1988, Massachusetts became the second state to approve a universal insurance plan—the Health Security Act—which remains in legislative limbo. This law would require most Bay State employers to insure full-time workers, with a \$1680 annual per-worker tax on employers who do not insure. A change of governors in that state has delayed implementation. The Health Security Act was de-

Accepted for publication March 14, 1991.

From the American Academy of Otolaryngology—Head and Neck Surgery, Alexandria, Va.

Reprinted from *Archives of Otolaryngology—Head & Neck Surgery* (1991;117:490-492).

signed to provide coverage for uninsured workers as well as unemployed individuals, disabled adults and children, and college students who lack health insurance. Several portions of that 1988 legislation have been implemented. The "common health" portion of Massachusetts' universal health care law began operation July 1, 1988. Medicaid benefits are extended to residents who leave the welfare program to return to work. People with preexisting medical conditions are also able to enroll, and thus far some 18 000 people are covered under the Common Health Program. All full-time college students in Massachusetts are required to document their coverage or purchase such coverage through their schools at an average yearly cost of about \$270. As a result, the number of uninsured college students in this state has been reduced by approximately 50 000. Pilot programs are under study involving Health Maintenance Organizations and one insurance company. January 1, 1990, the state began requiring employers with six or more employees to begin an annual \$16.80 fee for each of their employees. It is intriguing that this is the same number as the required tax mentioned before, but with the decimal point in a different place. This fee was intended to help low-income workers who are on unemployment compensation to purchase health insurance. However, the immediate future of this entire program appears to be quite shaky as more and more employers seem to be voting with their feet and moving vans.

Oregon has taken perhaps the most radical tack with still another type of comprehensive health care plan. Facing 388 000 uninsured (17.1% of its population), the state wants to rank some 1600 medical procedures used mainly by women and children under Medicaid, cutting off coverage for some underutilized or unrewarding services according to a formula intended to reflect both the cost benefit values and per unit cost of each procedure. In order to proceed with this "rationing" plan, Oregon must get a Medicaid rules' waiver from Health Care Financing Administration or Congress, which, as yet, is still forthcoming.

Washington State with its 800 000 residents is moving toward universal access. The Health Care Access Act of 1987 mandates an insurance-risk pool to cover the medically uninsurable. The Washington Basic Health Plan gives residents under 65 years of age a choice of prepaid, capitated, or managed care plans. To keep costs low, IHPP says that enrollment was limited to 30 000 in 1990 through 1992; 13 500 have signed up, and the state hopes to hit 25 000 by mid-1991. As IHPP notes, the number of uninsured is slightly higher now than 3 years ago when the process began. Washington's Governor Booth Gardner (Democrat) is heading a national governors' association task force on the topic.

California will probably be the scene of the next big fight over universal coverage. Assembly Speaker Willie Brown (Democrat) pushed through an employer mandate bill in 1989 that Governor Deukmejian vetoed. Brown will try again in 1991 with the hope that Governor Wilson will be less inclined to veto it. As a senator, Wilson tended to back public-private partnerships on health care issues (from *Medicine and Health Perspective*, November 26, 1990).

What does the future hold? You can surely believe that health insurance reforms will be implemented during the 1990s. Three separate commissions have or will be sub-

mitting recommendations by the spring of 1991: the Pepper Commission, the Steelman Commission (the quadrennial Social Security Advisory Council, headed by Deborah Steelman), and an internal Health and Human Services Task Force, headed by Under-Secretary Constance Horner. The Health and Human Services Secretary Louis Sullivan, MD, was directed in President Bush's 1990 State of the Union Address to review the various reports for the Administration. In addition, numerous members of Congress have introduced bills aimed at providing health care for uninsured people. The most notable ones are Senator Kennedy and Representative Waxman (S.768 and 1845) and Representative Stark (HR4965).

In addition to these efforts at the Federal level, the private sector has a number of proposals to increase access to care for medically indigent individuals. Enthoven and Kronick³ proposed universal coverage through the use of various public and private "sponsors" who would function as brokers purchasing group coverage from competing plans. Physicians for a National Health Program has proposed a plan similar to the Canadian health care system under which Medicare, Medicaid, and all private insurances would be eliminated, and all Americans would be covered by a public plan funded by the federal government, but administered at the state and local levels. The Coalition for Health Care Reform (50 business and professional organizations, including the American Association of Retired Persons and the American College of Physicians) plans to develop a new public-private partnership and a systematic reform plan, which will move current public policy debate forward by presenting new cost control elements, a financing plan, and administrative simplification among other suggestions (press release, March 14, 1990). The Coalition expects to publish its proposal sometime in 1991.

From all of this some good must come. The seriousness of our present situation is highlighted in the second report of the Council on Graduate Medical Education, which reports the alarming news that the hospital total margins have decreased for all hospitals and, as a result, that bond ratings for these hospitals tend to be downgraded. The major teaching hospitals have the lowest total margins in the industry despite the fact that they have relatively high prospective payment system operating margins. This is due in large part to the amount of uncompensated care that they deliver. All other things being equal, as the teaching hospital prospective payment system operating margins continue to decline, their total margins will continue to deteriorate, resulting in a threat to the size and quality of their graduate medical education programs and the ability of these institutions to provide care to the poor. One recommendation that the Council on Graduate Medical Education makes is that payment from all payers to teaching hospitals should be sufficient to enable them to deliver quality patient care and to offer exemplary teaching programs to students and residents. Congress must consider the impact of its decisions on the total margins of all hospitals generally and of teaching hospitals specifically. This will be particularly important as policies concerning the issue of care for the uninsured and underinsured are formulated. Congress must urgently address the issue of uncompensated and undercompensated care that teaching hospitals provide.

What does the American Academy of Otolaryngology-Head and Neck Surgery recommend for the immediate future? We support the four principles of the Physician Organizations for Access to Health Care, a coalition of 21 medical societies to which the Academy belongs (and is a member of the Steering Committee). These are (1) employer-provided health insurance with appropriate cost-sharing by the employees with tax relief to reduce the financial burden on small businesses; (2) expanded and improved Medicaid with minimum eligibility and benefit levels and incentives to enhance provider participation; (3) subsidized programs with cost sharing on a sliding scale premium basis for those not eligible for employer-based insurance and who have incomes in excess of the enhanced Medicaid eligibility level; and (4) health insurance programs, public or private, providing access to basic physical and mental health benefits. In the meantime,

physicians continue to provide health care services at reduced rates or without charge to those who cannot afford health care cost. This is perhaps not as well recognized by the public as it should be.

References

1. American Academy of Family Physicians Board report. *AAFP Physicians Statement on Access to Health Care for Uninsured*. Board report K. August 1989.
2. Inter-Governmental Health Policy Project Report. *The States and the Uninsured: Slowly but Surely Filling the Gaps*. Washington, DC: Inter-Governmental Health Policy Project; 1990.
3. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy. *N Engl J Med*. 1989;320:29-37, 94-101.

Access to Health Care in the United States

Byron J. Bailey, MD

Just in case you arrived recently on this planet from another spot in the universe or have just awakened from a 20-year coma, let me inform you that the current status of the health care system in this country is being debated hotly. The basic issues being scrutinized are access, quality, and cost. These three issues are tightly interwoven, and to a degree they are inseparable, but *access issues* have moved to the top of the list in contemporary proposals that are likely to shape our health care system during the 1990s.

This month, the ARCHIVES focuses attention on the general theme of access to health care for the uninsured and underinsured in this country. Who are these 33 million Americans who lack adequate access to the high-quality, technologically advanced medicine that is practiced in the United States?

They comprise:

- 24 million working Americans and their families,
- 3 million "uninsurable" persons, some of whom are employed, and
- 6 million indigent Americans whose income is below poverty level, but who lack coverage by the Medicaid system (which provides assistance to only about 40% of our poor).

It is readily apparent that this is not a new problem. Historically, this country has been generous in caring for the needs of the poor and underprivileged. Individuals, churches, foundations, and governmental entities at all levels have a tradition of philanthropic coalitions that have built hospitals and created programs designed to meet the needs of those who are less fortunate in our society.

For example, 100 years ago John Sealy, a wealthy resident of Galveston, Tex, bequeathed \$50 000 to establish a hospital that should "*treat the poor and when the time comes, the hospital will be given to the University of Texas*" to serve its newly chartered medical school. Over the past century, the John Sealy Hospital evolved into a complex of health care facilities that provided \$142 000 000 in uncompensated health care to the citizens of Texas last year. With seven hospitals, 1100 beds, and over 250 000 outpatient visits per year, those of us at our medical center, University of Texas Medical Branch at Galveston, address indigent care problems in Texas, but because they are enormous, we only make a modest dent in them. Across the land, we find that cities, counties, and states are pushing an expanding load up an ever-steeper slope, and into increasingly rarified air. The enterprise is definitely "in trouble."

State medical societies have taken this matter to heart

in many regions, eg, the Texas Medical Association, Austin, established a Task Force on Indigent Health Care in May of 1988.¹ This group is providing leadership in the improvement of access to current programs and in initiating new programs to serve the indigent. It has also increased physician participation in the provision of health care to the poor and to Medicaid patients and has raised the public's recognition of the dedication of many physicians in serving this group. More than three million Texans (about 20% of the total population) lack health insurance, and close to four million Texans are underinsured and cannot pay the difference between what they are billed and what the insurance company pays (because of the strict income and resource-eligibility criteria).

The state auditor has reported that \$4.9 billion was spent in 1988 to provide health care for the medically indigent in Texas, but this was woefully inadequate to meet the need. During that same year, \$1.3 billion uncompensated care was provided by hospitals in Texas, and many times that amount was provided by physicians through their offices. Texas physicians currently serve almost two million patients per year without any compensation.

In spite of these impressive efforts, we are failing to meet the health needs of our citizens. The economic and social consequences of relying on the current system of publicly financed care in our state are quite clear:

- Texas has the highest rate of teenage pregnancies in the United States,
- 25% of pregnant women in Texas receive no prenatal care,
- Over 40% of children younger than 4 years of age have not received immunization.

In many regions of the country, this is a problem that is concentrated in densely populated urban areas, but in Texas we see that rural patients are much more likely to live in poverty and to have limited access to health care facilities. The need for expansion of current efforts, impressive as they are, is evident. Changes are inevitable.

So, what will drive these changes? Why is it necessary to formulate a new approach to such an old problem? I believe that most of the changes will revolve around key areas that have become buzzwords for challenges and changes, such as:

- *Expectations* (anything can be cured, a single standard of excellence for all should be established),
- *Attitudes* (patients, physicians, employers, and insurers),
- *Politics* (government at all levels),
- *Costs* (corporate and governmental deficits),
- *Perceptions* (uncaring nurses and physicians),
- *Litigation* (if things do not turn out well, it must be someone's fault),

Accepted for publication March 26, 1991.

From the Department of Otolaryngology, University of Texas Medical Branch, Galveston.

Reprinted from *Archives of Otolaryngology—Head & Neck Surgery* (1991;117:481-483).

- Medicine as a *commodity*,
- Medicine as a *right*,
- Medicine as a *lever* (to get something else, eg, elected to office).

Did the changes grow out of the Great Depression and Franklin Roosevelt's New Deal? How much change resulted from the social upheaval of World War II and the postwar 1950s? Some medical historians cite the enactment of Medicare legislation as the turning point; if that observation is valid, we must realize that legislation affecting access to health care has great potential for changing the system fundamentally.

At the moment, the conventional wisdom is that the access problem is a national issue that can be addressed effectively *only by national legislative programs*. While the media have given some attention to state and local initiatives to manage scarce resources (translate that to rationing health care, as in Oregon), the focus has clearly been on the federal government as the center of the debate.

For instance, two national bodies are at work analyzing access issues. The Advisory Council on Social Security, Washington, DC, will propose a plan to assure access to health care in the private sector as well as in the public programs it supervises. The Pepper Commission of the US Congress will recommend solutions for problems of access to long-term care and health services for uninsured Americans. At the same time, insurance companies and large corporations are lobbying vigorously in Washington, DC, for just the right kind of universal health insurance program (the kind that has federal financial support).

No one has all of the answers to these challenging questions, but it is time to debate them and to seek fair, workable, affordable solutions. This month we highlight the issue of access to health care by needy Americans. We have invited the following several experienced and involved clinicians and an ethicist to address some of the key areas of interest:

- Indigent Care Then—Loring Pratt, MD, Fairfield, Me,
- Indigent Care Now—Neil Ward, MD, Phoenix, Ariz
- Preserving Access With Dignity for the Elderly—John Campbell, MD, and Rollie Rhodes, MD, Tulsa, Okla,
- The View From Washington, DC—Jerry Goldstein, MD, Alexandria, Va,
- Access to Trauma Care—Dale Rice, MD, Los Angeles, Calif,
- The Canadian Health Care System—Patrick Doyle, MD, Vancouver, British Columbia
- Who Ought to Get Good Health Care—Ronald A. Carson, PhD, Galveston, Tex.

In future issues of the ARCHIVES, we hope to explore other aspects of our health care system. We also welcome your comments and opinions. Our pages are here waiting to be filled with words and ideas that will ultimately improve the quality of health care in the United States and abroad. Your ideas are welcome and your participation is encouraged.

Few physicians have a comprehensive understanding of the time, effort, and expense that has been devoted by the American Medical Association (AMA) staff and membership to these challenges. The AMA has been labeled as reactionary and overly protective of physicians' interests in prior engagements within the political/socioeconomic

arena. I have sensed a major shift, especially during the past 5 years.

The emphasis in approaching issues of patient access has been directed toward finding fair, pragmatic solutions to complex dilemmas. Further emphasis is placed on the *strengths* of medicine in the United States, which continues to be the major research-and-development fountain for scientific advancement. We have a system that is the envy of the world, but it is now a system under challenge and a system under society's microscope.

You must become familiar with the structural components of this premiere health care system—beyond access, quality, and cost we need to maintain the patients' freedom to select how health care will be provided to each individual and how the system's vitality can be maintained.

The AMA has taken the lead in proposing a comprehensive and specific program to meet these challenges. There are 16 proposals within the "Health Access America" initiative of the AMA. They are sufficiently important to warrant your careful study of each proposal individually, but they are listed below in the briefest of terms to provide some general awareness of where organized medicine is heading. The proposal is a blueprint for extending access, controlling inappropriate health care cost increases, and sustaining the Medicare program to assure proper health care for all. It is summarized as follows:

1. Effect major Medicaid reform to provide uniform adequate benefits to all persons below the poverty level.
2. Require employer provision of health insurance for all full-time employees and their families, creating tax incentives and state risk pools to enable new and small businesses to afford such coverage.
3. Create risk pools in all states to make coverage available for the medically uninsurable and others for whom individual health insurance policies are too expensive and group coverage is unavailable.
4. Enact Medicare reform to avoid future bankruptcy of the program by creating an actuarially sound, prefunded program to assure the aging population of continued access to quality health care. The program would include catastrophic benefits and be funded through individual and employer tax contributions during working years. No program tax will be placed on senior citizens.
5. Expand long-term care financing through expansion of private sector coverage encouraged by tax incentives, with protection for personal assets, and Medicaid coverage for those below the poverty level.
6. Enact professional liability reform essential to reducing inordinate costs attributable to liability insurance and defensive medicine, thus reducing health care costs.
7. Develop professional practice parameters under the direction of physician organizations to help assure that only appropriate, high-quality medical services are provided, lowering costs and maintaining quality of care.
8. Alter the tax treatment of employee health care benefits to reward people for making economical health care insurance choices.
9. Develop proposals that encourage cost-conscious decisions by patients.
10. Seek innovation in insurance underwriting, including new approaches to creating larger, rather than smaller, risk-spreading groups and reinsurance.

11. Urge expanded federal support for medical education, research, and the National Institutes of Health, Bethesda, Md, to continue progress toward medical breakthroughs that historically have resulted in many life-saving and cost-effective discoveries.

12. Encourage health promotion by both physicians and patients to promote healthier life-styles and disease prevention.

13. Amend the Employee Retirement Income Security Act (ERISA) or the federal tax code so that the same standards and requirements apply to self-insured (ERISA) plans as to state-regulated health insurance policies, providing fair competition.

14. Repeal or override state-mandated benefit laws to help reduce the cost of health insurance, while assuring through legislation that adequate benefits are provided in all insurance, including self-insurance programs.

15. See reductions in administrative costs of health care

delivery and diminish the excessive and complicated paperwork faced by patients and physicians alike.

16. Encourage physicians to practice in accordance with the highest ethical standards and to provide voluntary care for persons who are without insurance and who cannot afford health services.

Strengthening the US health care system through the elements contained in this proposal will present an enormous challenge to all concerned. There will be no easy solutions to these problems. Each one of us will either be a part of the problem or a part of the solution. We urge you to read the following essays and to involve yourself in the area most important to you.

Reference

1. Jones DB. Physicians caring for Texans: no matter what. *Texas Med.* 1990;86:34.

Caring for the Underserved

Health Insurance Coverage Is Not Enough

Matthew Menken, MD

The President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research stated in 1983 that "Society has a moral obligation to ensure that everyone has access to adequate care without being subjected to excessive burdens."¹ By this measure, the health system of the United States is failing, since millions of citizens are unable to obtain necessary care each year. This is a paradox, given the large annual medical care expenditures in the United States. In 1991, such expenditures will exceed \$600 billion, or 11.5% of the gross national product, an average of \$2500 per capita. Comparative health care figures reveal that the United States spends per capita 38% more money than Canada, 88% more than West Germany, and 124% more than Japan. Moreover, expenditures in the United States are rising rapidly. Between 1980 and 1987, health expenditures in the United States increased from \$248 billion to \$500 billion, an increase of 102% during this brief period.²

I suggest that the proportion of the gross national product now spent on health care in the United States is probably more than sufficient to provide comprehensive care for all people, including the provision of effective and high-quality medical care for those people presently underserved.³ No other country has such readily available technology, an equivalent density of well-trained physicians in 24 specialties, or the institutional resources needed for first-rate medical care. American biomedical and health services research is generally acknowledged to be a bigger and better enterprise than anywhere else. A major deficiency is the system's failure to provide care for approximately 37 million people, or 15% of the population, who are unable to afford private insurance and are also ineligible for publicly funded programs.⁴ Contrary to popular belief, nearly three fourths of these uninsured citizens are working Americans and their families, and more than two thirds are white. Only 40% of all of our citizens below the poverty level (including many children) are insured through Medicaid, a program ostensibly designed for the poor. Given this disturbing evidence, it is not surprising that public opinion polls find many US citizens dissatisfied with their health care system. There is little doubt that health care access and cost are the major issues of concern for most of these Americans.

BARRIERS TO ACCESS

Since cost is only one of the barriers to access for high-quality care, the total number of underserved people

greatly exceeds the number of uninsured and underinsured. For example, many health indicators demonstrate a disparity among people of different racial and ethnic groups that cannot be ascribed entirely to cost. In 1987, the age-adjusted death rate for stroke among the black population was nearly twice that of white people, while the infant mortality rate for black infants (17.9 per 1000 live births) was more than twice the rate for white infants (8.6 per 1000 live births). About 79% of white mothers began prenatal care in the first trimester, compared with 61% of black and American Indian mothers.⁵

Such data suggest that, although cost is an important barrier to health care for many Americans, other access barriers may be paramount for some people. For example, geographic barriers are important for many rural families. In 1985, there were 53 physicians per 100 000 people in US counties whose total population was less than 10 000, compared with a national average of 165 physicians per 100 000 people. Geographic and language barriers, and the "culture of poverty," are also important problems in access in blighted urban areas where the mortality rate for adult black men exceeds that of some developing countries. Between 1963 and 1980, office-based physicians in such urban areas declined 45%.⁶ With the exception of some adult and pediatric training programs in hospitals that emphasize culturally appropriate care, there is a consensus that inner-city hospital-based care is often more impersonal and less culturally sensitive than office-based care, especially when such care is provided by minority physicians.⁷

Furthermore, medical care is only one factor in the determination of health status, which also depends on many other sociocultural parameters. Sanitation, the quality of the food supply, the level of education in the community, among other factors, influence personal health status. If medical care were the only determinant of health, and cost the only access barrier, then one would anticipate that a cost-free health care system, as under the National Health Service in the United Kingdom, would demonstrate health status equality for all population groups. Many studies in the United Kingdom conducted over two decades have demonstrated a robust negative association between social class (often called socioeconomic status in the United States) and all-cause mortality.⁸ The lower the social class, the greater the mortality. This remarkably consistent finding occurs at all levels of society, and it is not limited only to those people who are overtly poor and deprived. For example, individuals in upper managerial roles and their families have a lower rate of all-cause mortality than do those in middle-management roles and their families. The

Accepted for publication January 16, 1991.

From the Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, New Brunswick.

Reprinted from *Archives of Neurology* (1991;48:472-475).

same negative correlation has been observed for many medical and neurological disorders such as coronary artery disease, stroke, and many forms of cancer.⁹

Such data suggest that solving the problem of caring for the "uninsured and underinsured," although certainly of great importance, is not coextensive with the larger and more difficult task of caring for the underserved, as might be implied by the rubric of this theme issue of the *ARCHIVES* under which this article is subsumed. The conventional wisdom notwithstanding, individual physicians and the American Medical Association should make it clear to policymakers that insurance reform and financial measures alone, now as in the past, will likely fail to solve the twin societal goals of caring for the underserved and further improving care quality. In 1929, when national expenditures of \$3.6 billion, or \$30 per capita, were already a source of great public concern, the prestigious Committee on the Costs of Medical Care discovered "much waste" in such features of the health system as payments for ineffective medications, uncoordinated private practices, and inefficiently used hospitals. This Committee called for changes in the organization and patterns of delivery of medical care as the appropriate way to control costs, "... in view of the widespread lack of needed medical care"¹⁰

It remains unchanged after more than half a century that many factors that contribute to differences in health status as a reflection of the social stratification of society and the material aspects of living, such as housing, education levels, and working conditions, are not readily influenced by medical interventions, however accessible. The same public resistance to provide necessary resources for neuroscience research and the medically underserved applies also in the case of the nutritionally underserved, the housing underserved, and the educationally underserved. There are an estimated 2 million homeless people in the United States, and 20 million illiterate adults. For these people, a more humanitarian system of financing medical care would obviously be beneficial, but much more needs to be done. Clearly, the mitigation of poverty (especially child poverty), homelessness, and social deprivation can contribute greatly to improved national health indicators and the relief of human suffering. Given the focus of national attention on the cost of care, it should be underscored repeatedly that caring for the underserved and caring for the uninsured and underinsured are qualitatively different conceptualizations for public policy.

CARING FOR THE UNINSURED AND UNDERINSURED

Given the multifaceted and labyrinthine problems of the underserved, it is not surprising that proposals to mitigate the lack of health insurance abound, whereas the broader care crisis among the underserved has received much less attention.¹¹ It seems likely that even these more limited proposals will face rough sailing in the political arena. On July 1, 1988, President Reagan signed the Medicare Catastrophic Coverage Act of 1988, the largest expansion of federal involvement in health care since 1965, when the Social Security Amendments of 1965 (Medicare and Medicaid) were first implemented. Unlike prior policy that paid for coverage out of general tax revenues, the 1988 law required that the wealthier beneficiaries pay an income tax surcharge, and that all beneficiaries pay an additional \$4

in the basic Medicare part B monthly premium. Although mandated benefits under this law were quite generous, the constituency of the American Association of Retired Persons opposed this measure vigorously. Fearing political fallout, Congress hurriedly repealed the law altogether, leaving those senior citizens without supplementary private insurance more vulnerable than ever to increasing medical bills.¹²

The many proposals for improving insurance coverage reflect a consensus that something needs to be done, but a controversy about what to do.^{13,14} A proposal by Physicians for a National Health Program calls for a national health insurance program modeled on the system in Canada, with a single public insurance payor for all health care, and a predetermined annual cap on payment to hospitals.¹⁵ Another proposal, the Consumer Choice Health Plan, would convert all insurance plans to prepaid coverage, and would require employers to purchase insurance for employees' health care from competing managed care plans.¹⁶ The National Leadership Commission on Health Care proposal would provide health care for the uninsured through a state-based program funded by government, employers, and beneficiaries (on the basis of income), and would include an expanded technology assessment and outcome evaluation effort.¹⁷ The American Medical Association has presented a 16-point proposal, *Health Access America*, that includes reform of Medicaid, Medicare, and professional liability, also requires employer provision of health insurance, and would create state-run risk pools for the uninsured.¹⁸

CARING FOR THE UNDERSERVED

H. L. Mencken is reputed to have said that for every complex human problem there is a solution that is simple, elegant, and wrong. What is generically problematic with many proposals for health system reform is a viewpoint sharply focused on health insurance and cost. This focus on selected aspects or abstractions of an actual situation or problem, while ignoring other factors of relevance, is an example of a common source of logical error in many scientific fields, which has been called the Fallacy of Misplaced Concreteness.¹⁹ I would suggest that the American Medical Association's framework for change is exceptional and noteworthy, in part because it lends itself more readily than most other proposals to such structural and procedural changes in the delivery of medical services as may be needed to provide better care for the underserved. Caring for the uninsured and underinsured is an important first step, but equity and social justice in health care also require caring for all of the underserved. As an additional step toward resolution of this problem, I would propose the following measures as ones that merit thoughtful and open-minded discussion.

First, efforts to improve the scientific underpinning of medical care must be expanded, as a logical step toward prevention of disorders that rely for treatment on expensive "halfway" interventions. For example, it has been estimated that mortality from metastatic female breast cancer can be reduced 30% by regular breast examination and mammography performed at recommended intervals.²⁰ Moreover, about 30% of total Medicare hospital expenditures are on behalf of patients in the last year of life, mostly the last 6 months, many of whom suffer from Alzheimer's disease and other dementias. Given the large

cost of services for patients with dementia, and a prevalence of Alzheimer's disease of nearly half of all people older than 85 years of age (the most rapidly growing segment of the US population), it is astonishing that research funding for this disorder amounts to only 0.15% of the costs of care.^{21,22}

Although *Health Access America*, the AMA's health care proposal, correctly calls for the expansion of biomedical research, a broader paradigm of research is necessary to provide comprehensive care for the underserved. As I have suggested previously, amplification of the investigative effort should logically include much more research in the social and behavioral sciences relevant to human health and disease,²³ as well as an expanded health services research agenda to foster intersectoral cooperation with workers in such fields as nutrition, education, and housing.²⁴ Such health services research activity in the recent past has included an expanded effort to measure the appropriateness and effectiveness of medical care, an examination of health system administrative costs and the effects of reimbursement reform, as well as "the technology of patient experience" (outcomes research), as in the recent initiatives of the American College of Physicians and the Public Health Service's Agency for Health Care Policy and Research.²⁵⁻²⁷

Second, the absolute number and relative proportion of primary care physicians must be expanded. The President of the Association of American Medical Colleges has noted that "... our academic medical centers will lose vital national and public support if they do not respond to society's desire for more primary care physicians."²⁸ Of all physicians in the United Kingdom, Canada, and the United States, 70%, 50%, and 30%, respectively, are generalists. In my view, solving the crisis in primary care is an essential component of any solution to the problem of caring for the underserved in the United States. Put another way, most of the care requirements of the underserved fall within the domain of primary care medicine. Hence, providing adequate insurance for all people cannot be expected to correct the mismatch between actual health needs and the specialty distribution of physicians. This keystone issue is one that often goes unnoticed or unsupported by many neurologists and other specialists. It is a question of our orientation and commitment to provide high-quality medical care for individual patients, without a concomitant awareness of those people who are not receiving care, as well as the differential burden of illness in the entire population to be served. This is an example of what has been called the *Inverse Care Law*, which holds that market forces cause medical care to vary inversely with the need for it in the population to be served.²⁹

What is needed to address this issue, first of all, is a major initiative to recruit minority health professionals and strengthen minority medical institutions. Among 15 433 senior medical students in 1989 through 1990, only 826, or 5.3%, were black. (As of September 1, 1989, there were only 29 black neurology residents on duty, including one child-neurology resident.) Moreover, special measures are needed to recruit talented students from rural and other underserved areas, since these individuals are more likely to establish primary care practices where they are most needed.³⁰ Perhaps it is time to reform the criteria by which candidates are selected for enrollment in medical

school. Each medical school might set its own arbitrary *threshold level* of academic grades and examination scores that all candidates must surpass, but once that is done, grades and scores no longer matter in the selection process for those individuals who exceed the cutoff level.³¹ Finally, is there any doubt that the framework for physician payment and professional liability needs to be modified so that doctors can care for the underserved without great risk to their personal and family's financial security?

Third, medical schools need to develop appropriate community-oriented learning experiences for all medical students. In terms of faculty prestige and status, students learn that the "ins" are in (hospital based), and the "outs" are out (ambulatorium). Some schools have experimented with educational programs in health maintenance organizations, community health centers, and other facilities. It is also a question of decentralizing a health system that preferentially directs resources to surgical and procedural interventions carried out in hospitals, leaving community-based and preventive services seriously underfunded. Given the widespread dissatisfaction of many people with the health system, and the declining number of applicants to American medical schools, health science centers need to identify the task of medicine, in its broadest sense, for all students and residents, as well as the role of the doctor in an industrialized society. We seem to have forgotten that scientific expertise and technical competence are not the foundations of patient satisfaction in many situations. When learning is exclusively carried out in teaching hospitals, students sometimes get the erroneous impression that caring is what is left for doctors to do when curative medicine has failed.

In terms of caring for the underserved, learning experiences in the community will heighten student and resident awareness of local priority health problems based on sound epidemiological principles, as in the educational model developed by an international task force commissioned by the Network of Community-Oriented Educational Institutions for Health Sciences.³² Such "real life" experiences, in which students live and learn in selected community settings, are likely to foster the linkage between knowledge and skills, on the one hand, and the concept of social responsibility, on the other, so that all students understand why the social role of every doctor, regardless of the field of specialization, must extend beyond the care of individual patients.

CONCLUSIONS

In May 1977, the Thirtieth World Health Assembly resolved that "the main social target of governments and the World Health Organization in the coming decades should be the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life."³³ To achieve this goal in the United States, expanding insurance coverage for the uninsured and underinsured is an important step. However, the many barriers to care other than cost, and the limited role of medical care as a determinant of the overall health status of the population, call for a more comprehensive framework for reform that views health care for all of the underserved in its social context.

I suggest that the proposal of the American Medical Association, *Health Access America*, might be modified and enlarged to address these concerns. The expansion of the

biomedical research agenda should be matched by a much larger research effort in the social and behavioral sciences relevant to human health and disease, as well as the health services research agenda. The mismatch between the specialty distribution of physicians and the health needs of the entire population to be served calls for an increase in the number and proportion of primary care physicians, and the recruitment of a larger number of minority medical students. Finally, all medical students should have active learning experiences in a community-oriented framework of service provision to ensure that future generations of physicians understand the role of medical care for population groups as well as individual patients. Together, such changes signify the addition of relevance to the equation of access, cost, and quality in caring for the underserved.

References

1. President's Commission for the Study of Ethical Problems in Medical and Biomedical and Behavioral Research. *Report: The Ethical Implications of Differences in the Availability of Health Services*. Washington, DC; March 1983;1:22.
2. Politser P, Cunico E. *Socio-Economic Factbook for Surgery 1989*. Chicago, Ill: American College of Surgeons; 1989.
3. Wennberg JE. Outcomes research, cost containment, and the fear of health care rationing. *N Engl J Med*. 1990;323:1202-1204.
4. Braveman P, Oliva G, Miller MG, Schaaf VM, Reiter R. Women without health insurance: links between access, poverty, ethnicity, and health. *West J Med*. 1988;149:708-711.
5. National Center for Health Statistics. *Health, United States, 1989*. Hyattsville, Md: Public Health Service; 1990.
6. Kindig DA, Movassaghi H, Dunham NC, Zwick DI, Taylor CM. Trends in physician availability in 10 urban areas from 1963 to 1980. *Inquiry*. 1987;24:136-146.
7. Gessert C, Blossom J, Sommers PS, Canfield MD, Jones C. Family physicians for underserved areas: the role of residency training. *West J Med*. 1989;150:226-230.
8. Morris JN. Inequalities in health: ten years and little further on. *Lancet*. 1990;336:491-493.
9. Bunker JP, Gomby DS, Kehrer BH. *Pathways to Health: The Role of Social Factors*. Menlo Park, Calif: The Henry J. Kaiser Family Foundation; 1989.
10. Falk IS, Rorem CR, Ring MD. *The Costs of Medical Care*. Chicago, Ill: The University of Chicago Press; 1933;592-593.
11. *Education of Physicians to Improve Access to Care for the Underserved*. Hyattsville, Md: Health Resources and Services Administration, US Dept of Health and Human Services; 1990.
12. Ahluwalia JS. Health care in the United States: our dynamic jigsaw puzzle. *Arch Intern Med*. 1990;150:256-258.
13. Kinzer DM. Universal entitlement to health care: can we get there from here? *N Engl J Med*. 1990;322:467-470.
14. Rockefeller JD. The Pepper Commission report on comprehensive health care. *N Engl J Med*. 1990;323:1005-1007.
15. Himmelstein DU, Woolhandler S. A national health program for the United States. *N Engl J Med*. 1989;320:102-108.
16. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s. *N Engl J Med*. 1989;320:94-101.
17. Relman AS. The National Leadership Commission's health care plan. *N Engl J Med*. 1989;320:314-315.
18. American Medical Association. *Health Access America*. Chicago, Ill: American Medical Association; February 1990.
19. Whitehead AN. *Science and the Modern World*. New York, NY: Macmillan Publishing Co Inc; 1962:75.
20. Amler RW, Dull HB. *Closing the Gap: The Burden of Unnecessary Illness*. New York, NY: Oxford University Press Inc; 1987.
21. Moss M, Alpert M. Alzheimer' disease and other dementing disorders. In: Alpert M, Moss M, eds. *Geriatric Neuropsychology*. New York, NY: Guilford Press; 1988:145-178.
22. Weiler PG. The public health impact of Alzheimer's disease. *Am J Public Health*. 1987;77:1157-1158.
23. Menken M. The changing paradigm of neurologic practice and care: implications for the undergraduate curriculum. *Arch Neurol*. 1990;47:334-336.
24. Schaefer M. Home and health: on solid foundations? *World Health Forum*. 1990;11:38-45.
25. Ellwood PM. Outcomes management: technology of patient experience. *N Engl J Med*. 1988;318:1549-1556. Shattuck lecture.
26. Ginsburg JA, Prout DM. Access to health care. *Ann Intern Med*. 1990;112:641-661.
27. Clinton JJ. From the Agency for Health Care Policy and Research. *JAMA*. 1990;263:2158.
28. Petersdorf RG. Medical education. *JAMA*. 1990;263:2652-2654.
29. Hart JT. The inverse care law. *Lancet*. 1971;1:405-412.
30. DeFries GH, Ricketts TC. Primary health care in rural areas: an agenda for research. *Health Serv Res*. 1989;23:931-973.
31. Antonovsky A. Medical student selection at the Ben-Gurion University of the Negev. *Isr J Med Sci*. 1987;23:969-975.
32. Neufeld VR, Bearpark S, Winterton C. Optimal outcomes of clinical education. In: Gastel B, Rogers DE. *Clinical Education and the Doctor of Tomorrow*. New York, NY: New York Academy of Medicine; 1989:11-23.
33. World Health Organization Regional Office for Europe. *Targets for Health for All*. Geneva, Switzerland: World Health Organization; 1985.

Access to Health Care

One Neurologist's Perspective

Michael P. Earnest, MD

● Millions of residents of the United States have difficulty obtaining health care. Barriers impeding access to care include poverty, physical unavailability of health care services, absence of health insurance, and physicians unwilling to care for uninsured patients. Many patients do not successfully use health services because of educational, cultural, and language barriers. A major access barrier is lack of health insurance. Over 30 million people in the United States have none, the so-called medically indigent. Among them are over 3 million people with neurologic disorders. They have additional barriers to overcome because often they cannot work, cannot drive, have difficulty using public transportation, and have major cognitive and communication impairments. Medical and governmental bodies are debating solutions to the health care access crisis. Physicians should actively participate in this national debate. Neurologists should address the special needs of patients with neurological disorders.

A 52-year-old laborer had a long history of poorly controlled hypertension. A stroke at age 40 years caused a mild left hemiparesis, but he was able to continue working part-time and he was fully independent in his daily living. He had no health insurance and no savings. He had last seen a physician at a public clinic but admitted he had not taken the antihypertensive medications that had been prescribed. He admitted to prior heavy alcohol use but denied any alcohol use since the stroke.

Three days before his admission on December 5, 1990, while at home, he had sudden vertigo, nausea, and vomiting and then fell. He could not recall subsequent events but was found 48 hours later still on the floor, conscious but confused and unable to get up because of a severe left hemiparesis. He was taken by ambulance to a private hospital, where he was treated in the emergency department. A computed tomographic scan showed an old right-sided cerebral infarct. Twelve hours later, he was transferred to Denver (Colo) General Hospital and was admitted. The patient stated he was transferred because "I didn't have any money."

During this hospitalization, he was in the intensive care unit 18 days for management of severe hypertension, aspiration pneumonia, respiratory failure, recurrent chest pain, and thrombophlebitis. He had a gastrostomy because of dysphagia and aspiration. After 30 days, he was transferred to the rehabilitation unit. The total bill for the 30 days was \$61 185.

Five weeks later his left arm remained totally paralyzed. He could take a few steps using a walker and a leg brace and with assistance. He was

still fed by gastrostomy. He remained in the rehabilitation unit. He was not expected to return to work and so had applied for welfare assistance and Medicaid. The rehabilitation staff expected he would have to stay at least several weeks in a nursing home. He hoped eventually to resume independent living and to be able to swallow food again.

Many residents of the United States have difficulty obtaining needed health care (Table 1).^{1,2} Growing concern about barriers between patients and health care has prompted numerous governmental and medical reports on inadequate access to health care, the effect of this on health status, and possible solutions to the problem.³⁻⁶

FACTORS AFFECTING ACCESS TO HEALTH CARE

An individual's access to health care depends on several interrelated factors that fall into the following four principal categories: financial, health care system, personal/cultural, and social system.^{7,8} The financial determinants of access to care are health insurance (eg, private or employer-based insurance or Medicare/Medicaid coverage) and personal cash reserves to pay the expected bills, medication prescriptions, and related costs, including transportation. Access to the health care system is determined by the physical availability of a physician, clinic, or hospital⁶ and the capacity or willingness of those providers to see the patient. Personal and cultural determinants of access are the characteristics of the patient that enable successful acquisition of health care services. Education, ability to speak and read English, attitude toward health and health care, and cognitive ability are all important. Social system access to Medicaid or other public assistance programs for health care depend on availability of state and federal programs and accessible entry systems, including local offices.

A sick person can obtain health care services if there is a physician's office or other health facility available, the patient has sufficient insurance or cash, is motivated to seek care, and can communicate with the provider about the illness. However, multiple barriers prevent many US citizens from receiving needed care. Poverty, lack of health insurance, absence of physicians and clinics in rural and inner-city areas, low level of education, inability to speak or read English, and intimidating health system and social services bureaucracies all create barriers between many people and health care.^{1,7-10}

People with neurological disorders may have even more difficulty obtaining health care than do others. The author's clinical experience in an urban municipal hospital indicates that patients with dementia, stroke, Parkinson's disease, multiple sclerosis, and epilepsy have special

Accepted for publication March 11, 1991.

From the Chairman of the Task Force on Access to Health Care of the American Academy of Neurology, Minneapolis, Minn, and the Departments of Neurology, Denver (Colo) General Hospital and University of Colorado School of Medicine, Denver.

The opinions expressed in this article are those of the author alone. They do not necessarily reflect the opinions, nor are they policy, of the American Academy of Neurology, its Executive Board, or the Task Force on Access to Health Care.

Reprinted from *Archives of Neurology* (1991;48:476-479).

Table 1.—Percentage of 10 130 Respondents Reporting Difficulty Obtaining Health Care*

Type of Difficulty	%
People with chronic or serious illness who had no physician visit in prior 12 months	18.5
Needed care but had difficulty obtaining it	16.1
Pregnant women without care in first trimester	15.8
Economic barriers to receiving health services	7.8
Tried to get care but could not, for financial reasons	0.4

*Adapted from Robert Wood Johnson Foundation Special Report.¹

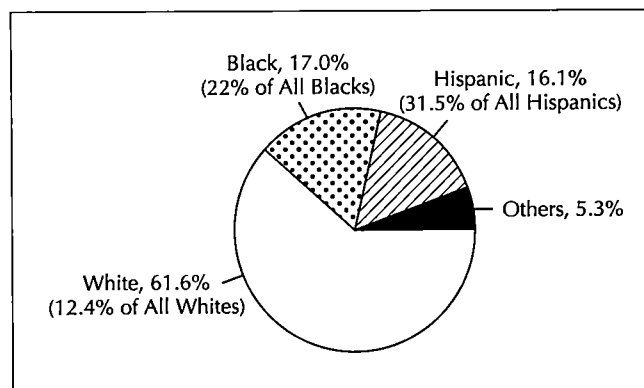
problems obtaining health care. Those diseases often cause loss of jobs, inability to obtain health insurance, problems driving a car or using public transportation, and impaired mental and communication ability, all of which interfere with obtaining health care. Public assistance programs, such as Medicaid, offer only partial relief of the financial problems, but the other problems remain formidable.

THE NATIONAL PROBLEM OF MEDICAL INDIGENCY

Because the United States has no universal health insurance system, individuals here must pay for medical care through personal health insurance or with out-of-pocket cash. Absence of health insurance is a major barrier to obtaining health care in our nation.^{1,3,6,9,11} More than 30 million people under the age of 65 years have no health care insurance.^{3,11} Estimates of this "medically indigent" population are as high as 37 million, about 15% of the US population.³ This group has substantially increased during the last two decades.^{1,3,11} Over half of these people are employed or are dependents of full-time employees; many others are the poor who are not eligible for Medicaid.^{3,11} About 62% are non-Hispanic whites, 17% are black, and 16% Hispanic (Figure).^{3,12} Ten million of the medically indigent are under the age of 19 years.³

Why do so many people have no health insurance? Federal and state health insurance systems cover many segments of the population. Medicare covers those over 65 years old and some chronically disabled people. Medicaid covers many impoverished pregnant women, mothers with dependent children, and most impoverished chronically disabled adults. However, state-funded Medicaid programs do not cover many people below the poverty level.^{3,5} Also, many young people just entering the work force have no insurance for themselves or for their families.³ Because of high premium costs, many employers, especially small and service-industry companies, offer no health insurance benefits.^{3,11} Self-employed workers can purchase insurance, but many cannot afford the high price. All of these gaps in health insurance coverage combine to create the huge medically indigent population.

A consensus is growing among political and medical leaders that the absence of health insurance prevents people from receiving needed health care.^{1,3,6,13} Long-term effects of reduced access probably are higher morbidity and mortality for uninsured people.^{14,15} The excess morbidity and mortality increase unemployment and increase expenditures of public funds for the health-impaired population.¹³ Widespread lack of health insurance is a major economic issue, not just one of social justice.



Uninsured US Population by race (from King³).

NEUROLOGIC DISORDERS AMONG THE MEDICALLY INDIGENT

The prevalence and incidence of neurologic disorders among the medically indigent have not been studied. Kurtzke¹⁶ estimated that neurologic disorders affect about 9.5% of the entire US population, ie, a point prevalence rate of 9500 per 100 000. Extrapolating that figure to the 34 million medically indigent, 3.2 million people have neurologic disorders. Using his estimates for prevalence of specific disorders, 272 000 people have cerebrovascular disease or transient ischemic attacks, 221 000 have epilepsy, 100 000 have lumbosacral herniated disk, 85 000 have cerebral palsy, 85 000 have dementia, and 68 000 have Parkinson's disease. Using Kurtzke's annual incidence figure, 850 000 medically indigent people develop a neurologic disorder within a given year.¹⁶ Many of those patients need both acute and continuing neurological care.¹⁷

An additional large but unquantified number of cases of the acquired immunodeficiency syndrome (AIDS) exist among the medically indigent, and the prevalence of cases is still increasing. Employed people with AIDS eventually lose their jobs and then their health insurance, becoming medically indigent. Neurologic complications occur in over half of the people with AIDS,¹⁸ so neurologic consultations, computed tomographic and magnetic resonance scans of the brain, and other neurologic tests often are needed.

NONFINANCIAL BARRIERS TO HEALTH CARE

Regardless of employment and insurance status, many patients in rural areas and in large inner-city poverty tracts have no access to care because physicians, clinics, and hospitals are not located there. Those patients must travel longer distances and incur higher costs in transportation and time to seek medical care. The physical and cognitive disabilities associated with neurologic diseases create even more problems traveling to distant clinics. The poor face other important access barriers.⁷⁻¹⁰ Limited education, especially about health, leads to delay in seeking acute care, inattention to preventive services (eg, detection and treatment of hypertension to prevent stroke), and noncompliance with medical instructions and medication usage. Language barriers interfere with access for Spanish-speaking, Asian, and other non-English-speaking patients. Cultural values that deny illness or values that emphasize traditional healing methods may interfere with proper use of available medical care. The high prevalence

Table 2.—Features Common to Many Proposals for Providing Health Insurance to All US Citizens

Expanded Medicaid to include the poor currently not covered
Mandate that employers provide health insurance to all employees
Establish state insurance "pools" to cover those "uninsurable" because of severe medical conditions
Develop insurance to pay for catastrophic illness and long-term care

of alcohol and other substance abuse and of severe mental illness in inner-city poor populations compounds the educational and cultural factors.¹⁹

Even middle-class, educated, insured patients are facing more barriers to neurologic care. Managed-care systems, trying to limit utilization and hold down costs, discourage primary care physicians from referring patients to specialists (eg, neurologists) and from ordering expensive tests, including computed tomographic and magnetic resonance scans. Hospital admissions are being limited by utilization-review plans and lengths of hospital stay controlled by diagnosis related group reimbursement. How much these mechanisms deny access to needed health services is unclear. Nonetheless, even though the purpose may be laudable, they are barriers between patients and health care services, including neurological services.

WHO TREATS THE ACCESS-POOR PATIENTS?

Most patients with limited access to medical care are treated in public clinics and hospitals and in urban teaching hospitals, both public and private. The "general hospital" and its clinics have long been the "safety net" for meeting health needs of the urban Medicaid and uninsured population.^{6,20} However, these facilities are under extreme financial and political pressure.^{21,22} Emergency departments, clinics, and wards are strained to the point that an acceptable quality of care often is compromised.⁶ Reduced reimbursements from Medicaid, increasing numbers of uninsured patients, the epidemics of AIDS, drug abuse, and violence in the inner cities, and increased hospital operating costs have driven many public and private teaching hospitals deeply into debt.^{21,22} Some have even closed.^{21,23} Those that remain open are short-staffed and overcrowded.

Physicians in their private offices and hospitals have traditionally cared for many Medicaid and medically indigent patients. However, inadequate Medicaid and other governmental reimbursement, rising overhead costs, fear of malpractice liability and decreased ability to shift costs from the "no-pay" to the "full-pay" patients have forced private physicians and hospitals to reduce charity care. Now, they give emergency care and then arrange further treatment at a public agency,^{21,24} the practice commonly termed "dumping."

With the private sector giving less charity care and the public sector unable to keep up with the increasing demand, indigent patients suffer even more. In the author's hospital and clinics, waiting times for visits have increased, heavy patient copayments have been instituted (eg, \$250 for elective surgery), clinic hours have been reduced, and, now, discussion of reducing or even discon-

tinuing major services has begun (eg, pediatrics and mental health). These steps are intended to increase revenues and decrease expenses, but they all create further barriers to access.

PROPOSALS TO SOLVE THE NATIONAL HEALTH CARE CRISIS

Numerous reports and plans have been published by governmental commissions, private study groups, and medical associations proposing steps to resolve the health care access crisis.^{3-6,13,25-27} Several features are common to many proposals (Table 2). First, they propose that the Medicaid program should be expanded to cover all people below the federal poverty level who currently are uninsured. The uninsured poor with incomes above the poverty level could enroll in Medicaid by paying a graduated premium based on income. Second, the working uninsured would be covered by employer-sponsored health insurance. Small business employers would be given tax incentives, thus reducing their cost for providing insurance. Third, state-sponsored insurance pools would cover the "uninsurable" population, people with chronic costly diseases who cannot obtain insurance and who also are not eligible for Medicaid. Finally, long-term care and catastrophic illness coverage would be provided.

Other proposals advocate a federal government-sponsored national health insurance plan, possibly based on the Canadian health insurance system.²⁸ Several states, among them Massachusetts, Hawaii, and New York, have established statewide universal health insurance plans.²⁹ Some proposals advocate community action and more donated charity care by hospitals and physicians.^{30,31}

In spite of the numerous commissions, studies, and proposals, major obstacles to any national solution exist. The first is the extraordinarily rapid growth in costs of health care and the corresponding growth of health care insurance premiums. Expenditures for health care in the United States grew from \$75 billion in 1980 to nearly \$500 billion in 1987 (*Am Med News*, Jan 12, 1990:25-26).³² Health care expenses escalated from 7.4% of the gross national product in 1970 to 11% in 1988. Any solution to the health insurance crisis must include provisions to pay for implementing the plan and must include steps to restrict the rapid growth in health care costs. Illustrating the costs involved, expansion of the federal Medicaid program to cover the currently uninsured poor would cost between \$9 and \$35 billion, the exact amount depending on the services covered and the population included.³³

Efforts to curb costs include "rationing" or "prioritizing" care by setting limited benefit packages,¹³ requiring patient copayment, imposing managed care plans in which primary care providers act as "gatekeepers" between patients and high-cost care, and second opinions for high-cost procedures. Unfortunately, these cost-cutting measures are also barriers between a patient and health services.

The problem of cost also leads to contradictory public opinions about health care. Polls indicate that we want everyone, even the poor, to have access to health care (*Am Med News*, July 27, 1990:6).^{34,35} We also want access to the latest, most expensive tests and treatments. Yet we do not want increased taxes or cuts in nonhealth programs to pay health care costs for the medically indigent (*Am Med News*, July 27, 1990:6).^{34,35}

Even if a comprehensive nationwide health insurance plan were enacted, other access barriers would remain. Limited access would persist because of inequitable distribution of health providers and because of the educational, cultural, and social factors.

WHAT CAN PHYSICIANS DO?

Individual physicians cannot solve the health care access problems for over 30 million uninsured or for the comparably large Medicaid population. However, a physician can treat an individual person who needs care. Physicians in private practice, especially specialists (eg, neurologists) who may only need to perform a diagnostic consultation and then see the patient again a few times, can help by accepting uninsured and Medicaid patients. The editor of the *Journal of the American Medical Association* encouraged such professional commitment.³⁰ Physicians who work in municipal hospitals, public clinics, and teaching hospitals can help by continuing to provide as much high-quality, readily accessible care as is possible. Private and public physicians alike can urge administrators and boards of their hospitals and clinics to remain fully available and responsive to the needs of patients who come for care. At the same time, all physicians can limit health care costs for individual patients, and collectively for all of society, by charging reasonable fees, ordering tests prudently, and managing cases in a cost-effective fashion.

At the community level, physicians and medical societies can donate services to public clinics and hospitals. They can establish voluntary free clinics to give care to people with no other resources. They can work with community groups concerned about the problems of medical indigency, long-term care, cost of health care, and related issues.³¹ Neurologists can advocate, with special authority, provision of services for people with chronic neurologic impairments, especially those in the medically indigent population.

On the state and national levels, organized physician associations can educate legislatures and governmental agencies about the health needs of the indigent and recommend programs to improve access to health care. Specialty societies, including neurologic societies, can develop plans focused on the needs of their specific patients. They can publicize those programs through the press and their own publications. The American Medical Association, American Society of Internal Medicine, American Academy of Pediatrics, and American College of Physicians, among others, have developed specific proposals.^{4,5,7,26,36,37} The American Academy of Neurology has created a Task Force on Access to Health Care to study access and economic issues for patients with neurologic disorders.³⁸ Professional associations can also speak out on behalf of adequate funding for the health care agencies that provide care to the indigent and Medicaid populations.

COMMENT

Access to health care has become more difficult for tens of millions of people in the United States, many of whom cannot obtain needed health care. More than 3 million among that population have neurologic disorders. The long-term consequences of inadequate access to care cannot be predicted, but clinical common sense and available research studies indicate that the consequences will be

higher morbidity and mortality in the medically indigent population. Exploding costs and widespread opposition to spending more on health care both preclude "quick-fix" solutions to the problem. Many different proposals have been made, and state legislatures and Congress are debating the issues.

Under any future national health plan, physicians will provide the health care. We should take an active part in the national debate on access to that care. Neurologists should speak out for the needs of patients with neurologic disorders, including the special needs of those among the medically indigent.

My thanks to L. P. Rowland, MD, New York, and J. A. Cohen, MD, Denver, Colo, for helpful comments and to Denise Lovato for preparing the manuscript.

References

1. Robert Wood Johnson Foundation Special Report. *Access to Health Care in the United States: Results of a 1986 Survey*. Princeton, NJ: Robert Wood Johnson Foundation; 1987.
2. Aday LA, Fleming GV, Andersen R. *Access to Medical Care in the US: Who Has It, Who Doesn't*. Chicago, Ill: Pluribus Press; 1984.
3. King M. *Medical Indigency and Uncompensated Health Care Costs*. Denver, Colo: National Conference of State Legislatures; 1989.
4. American Academy of Pediatrics. *AAP Special Report: Barriers to Care: Why Millions of Children Live in the Shadows, Unable to Receive Appropriate Health Care*. Elk Grove Village, Ill: American Academy of Pediatrics; 1989.
5. American Medical Association. *Health Policy Agenda for the American People: The Final Report of the Ad Hoc Committee on Medicaid*. Chicago, Ill: American Medical Association; 1989.
6. Nutter DO. Medical indigency and the public health care crisis: the need for a definitive solution. *N Engl J Med*. 1987;316:1155-1158.
7. American Academy of Pediatrics. *Solutions: An Overview of the Academy's Three-Part Access to Care Campaign*. Elk Grove Village, Ill: American Academy of Pediatrics; 1990.
8. Bunker JP, Gomby DS, Kelver BH, eds. *Pathways to Health: The Role of Social Factors*. Menlo Park, Calif: The Henry J. Kaiser Family Foundation; 1989.
9. Davis K, Rowland D. Uninsured and underserved: inequities in health care in the United States. *Milbank Q*. 1983;61:149-176.
10. Dutton DB. Social class, health, and illness. In: Aiken LH, Mechanic D, eds. *Applications of Social Science to Clinical Medicine and Health Policy*. New Brunswick, NJ: Rutgers University; 1986:31-62.
11. Wilensky GR. Filling the gaps in health insurance: impact on competition. *Health Aff*. Summer 1988:133-149.
12. Trevino FM, Moyer ME, Valdez B, Stroup-Benham CA. Health insurance coverage and utilization of health services by Mexican Americans, mainland Puerto Ricans, and Cuban Americans. *JAMA*. 1991;265:233-237.
13. Kitzhaber J. Uncompensated care: the threat and the challenge. *West J Med*. 1988;148:711-716.
14. Braverman P, Oliva G, Miller MG, Reiter R, Egarter S. Adverse outcomes and lack of health insurance among newborns in an eight-county area of California, 1982 to 1986. *N Engl J Med*. 1989;321:508-513.
15. Hadley J, Steinberg EP, Feder J. Comparison of uninsured and privately insured hospital patients: condition on admission, resource use, and outcome. *JAMA*. 1991;265:374-379.
16. Kurtzke JF. The current neurologic burden of illness and injury in the United States. *Neurology*. 1982;32:1207-1214.
17. Kurtzke JF, Bennett DR, Berg BO, Beringer GB, Goldstein M, Yates TS Jr. On national needs for neurologists. *Neurology*. 1986;36:383-388.

18. Leehey M, Gilden D. Neurologic disorders associated with the HIV and HTLV-I viruses. *Cur Neurol*. 1990;10:1-63.
19. Shern D, Dilts SL. The concentration of severely disturbed CMI in a core urban population. *Admin Mental Health*. 1987;15:18-28.
20. Gage LS, Andrulis DP. Our nation's great public hospitals. *JAMA*. 1987;257:1942-1943.
21. Friedman E. Problems plaguing public hospitals: uninsured patient transfers, tight funds, mismanagement and misperception. *JAMA*. 1987;257:1850-1857.
22. Friedman E. Public hospitals often face unmet capital needs, underfunding, and uncompensated patient-care costs. *JAMA*. 1987;257:1698-1701.
23. Bindman AB, Keane D, Lurie N. A public hospital closes: impact on patients' access to care and health status. *JAMA*. 1990;264:2899-2904.
24. Ansell DA, Schiff RL. Patient dumping: status, implications, and policy recommendations. *JAMA*. 1987;257:1500-1501.
25. *A Call for Action: Final Report*. Washington, DC: The Pepper Commission, US Bipartisan Commission on Comprehensive Health Care; 1990.
26. *The Health Care Crisis: A Report to the American People*. Washington, DC: Senate Committee on Labor and Human Resources; 1990.
27. American Medical Association. *Health Access America: The AMA Proposal to Improve Access to Affordable, Quality Health Care*. Chicago, Ill. American Medical Association; 1990.
28. Himmelstein DU, Woolhandler S, the Writing Committee. A national health program for the United States: a physicians' proposal. *N Engl J Med*. 1989;320:120-128.
29. Beauchamp DE, Rouse RL. Universal New York health care: a single-payer strategy linking cost control and universal access. *N Engl J Med*. 1990;323:640-644.
30. Lundberg GD, Bodine L. Fifty hours for the poor. *JAMA*. 1989;262:3045.
31. Mayster V, Waitzkin H, Hubbel A, Rucker L. Local advocacy for the medically indigent: strategies and accomplishments in one county. *JAMA*. 1990;263:262-268.
32. Levit KR, Freeland MS. National medical care spending. *Health Aff*. Winter 1988:124-136.
33. Thorpe KE, Siegel JE, Dailey T. Including the poor: the fiscal impacts of Medicaid expansion. *JAMA*. 1989;261:1003-1007.
34. Blendon RJ. The public's view of the future of health care. *JAMA*. 1988;259:3587-3593.
35. Gabel J, Cohen H, Fink S. Americans' views on health care: foolish inconsistencies? *Health Aff*. Spring 1989:103-118.
36. American Society of Internal Medicine. *Ending Separate and Unequal Health Care*. Washington, DC: American Society of Internal Medicine; 1990.
37. Ginsburg JA, Prout DM. Access to health care: position paper of the American College of Physicians. *Ann Intern Med*. 1990;112:641-661.
38. Earnest MP. Access to health care in the United States: barriers for neurologic patients, challenges for neurologic physicians. *Neurology*. 1990;40:1815-1819.

Access to Neurological Care for Minorities

Edgar J. Kenton, MD

● **Minority groups comprise a major segment of the estimated more than 34 million Americans without insurance coverage and also the underinsured. Neurologic disease and neurologic complications of the major causes of morbidity and mortality affect minorities protracted by limited access to health care. Hypertension, a major cause of stroke in the black population, is just one example of the impact of accessibility to intervention in central nervous system disease. Health statistics note the persisting gap between minority groups and the nation's norms for life expectancy. Aging America and particularly black elderly women, combined with the lagging infant mortality among minority groups, demonstrate limited access issues beyond economics, reflecting inner city mores, cultural barriers, and communication delay limiting contact with the practicing neurologist. Awareness of such access limitations to neurological care for minorities demands the attention of the practicing neurologist and the neurological societies.**

Many reports in recent medical and lay literature cite increasingly limited access to our health care system by minority populations. The American College of Physicians, the nation's largest medical specialty society, published a position paper in 1990 calling for a nationwide program to improve access to health care for all Americans.¹ They cited the growing number of Americans without access to health care. It is well documented that access to health care is dependent on one's socioeconomic level and also that minorities comprise the majority of the lower socioeconomic scale.^{2,4} It follows that limited access to health care affects many minority groups seeking care. Minorities comprise a large component of the estimated 34 to 37 million Americans under age 65 who have no health care insurance.⁵ Furthermore, life expectancy among many minority groups has declined in recent years. Mortality rates among the poor and disadvantaged are higher for most causes of death as are prevalence rates of major disabilities including heart disease, cancer, and stroke.^{6,7}

Practicing neurologists can attest that complications of heart disease, cancer, and stroke damage the central nervous system. Early intervention can prevent or reduce the severity of those disorders; limited access to medical attention probably accentuates severity. To disadvantaged minorities, neurologic symptoms and signs as well as the discipline itself are enigmas. They may refuse a lumbar puncture for fear of paralysis or fear of spreading the malady, or equate multiple sclerosis with muscular dystrophy or defer a computed tomographic scan or magnetic res-

onance imaging of the brain for fear of brain injury. Others fail to initiate or maintain medication due to cost.

The incidence of stroke has declined 60% over the past three decades, yet such cannot be stated at a similar rate in minorities.⁸ There has been little impact on mortality during the initial 3 days following stroke onset and only a slight improvement in the 30-day mortality rate.⁹ Studies have been reported by the National Cancer Institute, the National Minority Health Association Inc, the National Medical Association, and the Urban League, citing the relation of limited access for health care among minorities.¹⁰⁻¹³ Hypertension, heart disease, and atherosclerosis are the major factors influencing stroke and are clearly related to access issues. Illustrating the gravity of the current situation, Charles Francis, MD, Director of Medicine, Harlem Hospital, New York, NY, reported on the crises of compliance with antihypertensive medication in the inner city¹⁴ and indicated that hypertension control rates among Harlem patients have fallen from more than 80% to only 50% over the past several years.

Statistics, however, suggest neurologic complications of the leading mortality causes affecting minorities may, indeed, be remedial as attempts are being made by many medical organizations to improve access to health care. The National Center for Health Statistics revealed the average life expectancy in 1988 that for blacks was 69.2 years and for whites, 75.6 years.¹⁵ From 1984 through 1988, the gap between life expectancies for whites and blacks increased from 5.6 years to 6.4 years. However, the year 1989 showed a distinct improvement in life expectancy for the population as a whole over 1988 and in blacks' life expectancy, despite a 32% increase in deaths from human immunodeficiency virus infection and an increase in homicides in the United States. Death rates for cerebrovascular diseases, heart disease, and atherosclerosis were less in 1989 than in 1988; heart disease, stroke, and cancer all showed a decline in mortality compared with those in the previous year. Statistics suggest neurologic complications of such major mortality and morbidity issues, contributors to significant components of the nation's health care costs, demand our attention in removing existing barriers of access to neurological care for minorities.

While the uninsured and the underinsured face socioeconomic barriers inhibiting access to neurological care, there are other minority-based issues that restrict access. As discussed by the several articles in the recent *JAMA* issue on Hispanic health in the United States, there is high minority density in the inner cities where few private doctors and clinics are available and primary health care is provided by overcrowded emergency rooms and public clinics.¹⁶ Those initial lines of medical defense usually do not address the many subtleties of neurologic diagnoses,

Accepted for publication March 11, 1991.

From the Division of Neurology, Lankenau Hospital, Philadelphia, Pa.

Reprinted from *Archives of Neurology* (1991;48:480-483).

nor do they provide continuity of care often required in neurologic management, for example, continuing treatment of epilepsy. Generations of minorities distrust such facilities, often remembering the bad experiences of their ancestors; and tradition dies hard.

In addition, many minority senior citizens supported by Medicare and adequate supplementary insurance could afford a private doctor. But often they are admitted from emergency rooms to the teaching services as unassigned patients to be followed thereafter by residents in the outpatient clinics and not as private patients. Thus, they have limited access to more experienced physicians, are exposed to the resident rotation system, and are relegated to a system usually established for the underinsured. Also, how many minority patients have the resources required to secure disability benefits for chronic neurologic impairment from a complex, uncaring, and bureaucratic social services system? They often need legal assistance. Many minority stroke patients with diagnosis related group-limited hospital stay would rather return to the supportive familiarity of the home and family, but cannot because of working spouses or children. Indeed, many minority individuals with primary neurologic illness such as transient ischemic attacks, "mini strokes," multiple sclerosis, disabling peripheral neuropathies, and spondylitic spastic paraparesis never see a neurologist, preferring the continuity of the family physician over the impersonal public clinic or hospital.

To limit access discussions to economic issues and insurance coverage, therefore, avoids historically inculcated and culturally ingrained ingredients that impair utilization of neurologic services. Minorities, regardless of economics, because of their limited contact with physicians of their own background and because of the low rate of preventive physical examinations, such as recommended by the US Preventive Services Task Force, continue to lag behind the nation's norms in access to all health care, including neurologic care.¹⁷ To the extent that acculturation succeeds through education, job opportunities, social and community action programs, and physician participation will access to health care proceed.

The Medicare/Medicaid programs, created in the mid-1960s, produced significant improvement in the health status of minorities. However, those same populations continue to lag behind the white population not only in infant mortality but also in life expectancy of its senior citizens affected by stroke, Parkinson's disease, and dementia.^{18,19} *JAMA*, in its issue focusing on minority health, highlighted a 1986 survey on the utilization of health services. That survey demonstrated significant lack of access to health care among black compared with white Americans experienced at all socioeconomic levels. Also, blacks compared with whites were less likely to be satisfied with the quality of physician care and hospital care, and they were more likely to believe length of stay too short.²⁰⁻²²

Hypertension, a leading cause of stroke in minorities, seriously impacts on neurologic care. Numerous studies²³⁻²⁵ reveal that approximately 28% of adult blacks suffer from hypertension compared with about 17% of adult whites and that blacks develop hypertension at a younger age than do whites. Advanced hypertension is five times more common in blacks. Stroke mortality in blacks is 65% higher than that in whites. Black persons

with hypertension probably are more susceptible than are hypertensive whites to the neurologic complications of the disease. Yet, according to the *JAMA* articles, whites and blacks respond similarly to antihypertensive therapy, achieving control at about the same numbers.²⁶ Yet, minority populations do not receive antihypertensive therapy to the same degree as the white population because of access-limiting costs of drugs, continuity of care, early intervention, and education of drug effects. The implications of such limited access to antihypertensive regimens can be seen in such reports by Francis¹⁴ and others²⁷⁻³⁰ revealing deteriorated health care for minorities and contributing to end-stage disease.

Other studies have shown that the delay from onset of symptoms for stroke to arrival at the hospital³¹ was markedly prolonged for minorities compared with predominantly white populations.¹³ The same is true for the latency period from arrival at the hospital to neurologic consultation for minorities, if such consultation is obtained at all.

The "graying" of America is one of the most significant demographic barriers to neurologic care access. Current national population projections indicate that the number in all age categories of 60 years will be considerably larger at the end of this century and will continue to grow for the first three decades of the 21st century. The black elderly are the most economically disadvantaged of any of the minority groups. The black elderly are more likely to be sick and disabled with higher rates of hypertension, cerebrovascular disease, cardiogenic stroke, spondylitic paraparesis, peripheral polyneuropathy, and dementia. Elderly black women are revealed by studies to be the most apt to be living alone, relying on increasingly shrinking access to and availability of our nation's home health care providers.³²

Recognizing these factors of minority-based health care that contribute to neurologic complications, what is the role of the neurologist in easing access to neurological care? Minorities experience complex health disadvantages related to poverty, disinformation, and racial bias, limiting access to quality health care. However, neurologists first and foremost must be aware of these issues. If we wish to implement the plan proposed by the National Advisory Neurological Disorders and Stroke Council of the National Institute of Neurologic Diseases and Stroke for the "decade of the brain," the issues of access to health care become fundamental for enabling such efforts.³³ Louis Sullivan, MD, Secretary of Health and Human Services, stated that what we do now in areas of prevention will pay off well into the 21st century and that our health, its maintenance, and prevention of disease have become a high priority in the black community.³⁴

Matthew Menken, in his editorial in the November issue of the *ARCHIVES*, concerning the practice of neurology, commented that "As an educational tool the anecdotal method assumes that the practicing physician who is roughly right is preferable to one who is precisely wrong."³⁵ The wealth of anecdotal experience of practicing neurologists in both the public and private sectors who deal with minority health care indicates that access to neurological care is an important health care issue. Minority patients with stroke, epilepsy, cerebral palsy, dementia, developmental disability, head trauma, and neurological complications of acquired immunodeficiency syndrome need neurological

consultations and may need computed tomographic scans or magnetic resonance imaging and then continuing, long-term management. The personal experience of the author and other neurologists³⁶ indicates that minorities have difficulty obtaining neurologic care. Precise data on the extent of the problem for neurological patients are not available. However, the national problem for minority patients overall is well documented and the problem demands corrective action. Our specialty organizations must mobilize the support and the participation of neurologists in practice to address the chief complaints of the minority community in their quest for access, ie, how to obtain quality neurologic care. The symptoms and signs of access malady must be addressed, ie, problems that minority groups have communicating with providers of neurologic care, plus limited education especially about health, impeding disease detection and prevention, and culturally based lack of motivation to seek help. Many community resources should be utilized to help solve the problem including minority churches, social organizations, and political groups. Practicing neurologists and our specialty societies can develop studies such as conducted by the Robert Wood Johnson Foundation⁵ and the Massachusetts Institute of Technology, Cambridge, Mass,³⁷ and can stimulate activities by private foundations in their community.^{38,39} The American Academy of Neurology has established a task force on access to neurologic care.³⁵ We, as neurologists, must heed the call of the minority community and provide the availability of neurologic care.

Blacks constitute 12% of the population, 4% of doctors under age 40, and only 2.5% of neurology residents in the 1980s.⁴⁰ What can and should the neurologic societies do about such disturbing numbers? Programs should be developed in coordination with the task force on access to neurological care, educating its members in such issues. Programs can be provided addressing neurological problems of minorities for presentation to the minority communities in detection and early intervention strategies. High school student programs in minority communities dealing with neurological issues can be highly effective in recruiting medical school applicants. Neurological societies can also encourage minority medical student applicants for currently available student training grants in neurological research. What can individual neurologists do in addition to becoming more aware of this enormously complex issue? In addition to participation in such proposed programs and encouraging such by the various neurological societies, the neurologist must pursue legislation at the federal, state, and local levels addressing these issues. They must educate their colleagues, students, residents, and patients in limiting unessential studies and hospitalizations, becoming allies of third-party payers. They must establish and participate in medical ethics committees for hospital staffs, guiding the appropriate health care and peer review of death and dying for the terminally neurologic patient.

As neurologists we must study the demographics for minority neurology in the United States. Such demographics have yet to be established. While various studies of specific neurologic disorders accumulated in the literature might note the incidence and prevalence of a particular disease in a minority group, usually stated as non-white, few indicate specific minority ratios. The changing

demographics of the population into the 1990s and the 21st century requires neuro-epidemiologic studies of our shifting black, Hispanic, Asian-American, and Native American populations. One can extrapolate from the Kurtzke⁴¹ data on the neurologic burden of illness and injury in the United States an estimate of individuals with neurologic disorders among the approximated millions of uninsured and underinsured Americans.³⁶ However, the paucity of minority risk factor data for stroke can be seen in the otherwise comprehensive special report of the World Health Organization task force on stroke and other cerebrovascular disorders published in 1989.⁴² Two studies supported by the National Institute of Neurologic Diseases and Stroke are presently addressing the disparity of stroke incidence and mortality between black and white Americans.⁴³ Studies such as these at Columbia University and the University of Maryland are examples of the need to pursue minority neurologic demographics. A poster presentation on race and incidence of hemorrhagic stroke presented at the stroke meetings in San Francisco is encouraging in this regard.⁴⁴

Finally, the behavior of many office-based neurologists toward Medicaid patients, Medicare assignment, and the many mettlesome problems associated with caring for such patients need to be addressed. Bureaucratic enforced payment fees and burdensome accompanying paperwork are relegating such patients to second-class or lower strata in access to high-level health care. The ever-increasing overhead of the neurologist in office practice limits the entrance of such patients into such quality care assumed by the private-pay patients. Indeed, such rationing of health care inherent in any second-party- and third-party-subsidized delivery system since its inception, is now deeply embedded in various proposals to curtail rising health care costs further challenging the economics and ethics of the office- and hospital-based neurologist. Hence, the neurologist must join the minority community and its leaders in providing incentives to ease such patients in the quality delivery of health care. If various tax and business incentives, long established for businesses and corporations, can be directed toward such access barriers created by Medicaid and Medicare assignments, the neurologist will be aided in behavior modification toward such patients. The skills of the neurologists can be bartered for items of need to exercise such skills just as small businesses are taking such an approach in such recessionary times. The time has come for the community and the health care provider to establish innovative financing strategies to maintain its citizens at the first-class attitudes of both the provider and the recipient.

As Secretary Louis Sullivan, MD, indicated in his keynote address to a satellite meeting of the 1991 International Conference on Stroke, the costs of stroke is a \$25 billion health problem and stroke is a discriminating disease disproportionately affecting women and blacks. Secretary Sullivan highlighted access to medical care, contingent on personal responsibility for disease prevention, containment of health care costs, a public health system for the poor, a reexamination of the private insurance system, and providing outcome studies of effectiveness of treatment strategies.⁴⁵ In all such areas, the neurologist and neurological societies need participate.

References

1. American College of Physicians Position Paper. Access to health care. *Ann Intern Med.* 1990;112:641-661.
2. Kleinman JC, Gold M, Makuc D. Use of ambulatory medical care by the poor: another look at equity. *Med Care.* 1981;19:1011-1028.
3. Aday LA, Fleming GV, Anderson R. *Access to Medical Care in the US: Who Has It, Who Doesn't.* Chicago, Ill: Pluribus Press; 1984.
4. Bunker JP, Gomby DS, Kehrer BH. *Pathways to Health: The Role of Social Factors.* Menlo Park, Calif: The Henry J. Kaiser Family Foundation; 1989.
5. Robert Wood Johnson Foundation Special Report. *Access to Health Care in the United States: Results of a 1986 Survey.* Princeton, NJ: Robert Wood Johnson Foundation; 1987.
6. National Center for Health Statistics. *Vital Statistics of the United States, 1979: Mortality.* Washington, DC: Public Health Service; 1984;2, pt A. US Dept of Health and Human Services publication (PHS) 84-1101.
7. Report of the Secretary's Task Force on Black and Minority Health. Washington, DC: US Dept of Health and Human Services; August 1985.
8. Whisnant JP. The role of the neurologist in the decline of stroke. *Ann Neurol.* 1983;14:1-7.
9. Garraway WM, Whisnant JP, Drury I. The changing pattern of survival following stroke. *Stroke.* 1983;14:699-702.
10. *Proceedings of the National Black Leadership Initiative on Cancer-Regional Meetings.* Bethesda, Md: National Cancer Institute; 1988.
11. Foard F. *Minority Health News.* Harrisburg, Pa: National Minority Health Association, Inc; 1990.
12. Jones B. Disproportionate health risk in minorities: does medical education need to change? *J Natl Med Assoc.* 1990;82:395-396.
13. Leffall LD. *Health Status of Black Americans: The State of Stroke America, 1990.* Washington, DC: Urban League; 1990.
14. Francis C. The crisis of compliance with antihypertensive medications in the inner city: causes and hope. In: *Medical Intelligence Alert.* Patterson, NY: Caduceus Medical Publishers Inc; 1990.
15. National Center for Health Statistics. Advance report of final mortality statistics. *Month Vital Stat Rep.* 1989;38(suppl 5):1-47.
16. Council Report. Hispanic health in the United States. *JAMA.* 1991;265:248-252.
17. US Preventive Services Task Force. *Guide to Clinical Preventive Services.* Baltimore, Md: Williams & Wilkins; 1989.
18. *Health of America's Children.* Washington, DC: Children's Defense Fund; 1989.
19. Edelman, M. Black children in America. In: *The State of Black America.* Washington, DC: Urban League; 1989:63-76.
20. Blendon RJ, Aiken LH, Freeman HE, Corey CR. Access to medical care for black and white Americans: a matter of continuing concern. *JAMA.* 1989;261:278-281.
21. Freeman HE, Blendon RJ, Aiken LH, et al. Americans report their access to care. *Health Aff (Millwood).* 1987;6:6-18.
22. *Report of the Secretary's Task Force on Black and Minority Health.* Bethesda, Md: Dept of Health and Human Services, August 1985.
23. Caplan LR, Gorelick PB, Hier DB. Race, sex, and occlusive cerebrovascular disease: a review. *Stroke.* 1986;17:648-655.
24. Berkson DM, Brown MC, Stanton H. Changing trends in hypertension detection and control: the Chicago experience. *Am J Public Health.* 1980;70:389-393.
25. Hypertension Detection and Follow-up Program Cooperative Group. Blood pressure studies in 14 communities. *JAMA.* 1977;237:2385-2391.
26. Kirn TF. Research seeks to reduce toll of hypertension, other cardiovascular diseases in black population. *JAMA.* 1989;261:195.
27. McCord C, Freeman HP. Excess mortality in Harlem. *N Engl J Med.* 1990;322:173-177.
28. Ginzberg E. Access to health care for Hispanics. *JAMA.* 1991;265:238-241.
29. Svensson CK. Representation of American blacks in clinical trials of new drugs. *JAMA.* 1989;261:263-265.
30. Beardsley EH. *A History of Neglect: Health Care for Blacks and Mill Workers in the Twentieth Century South.* Knoxville, Tenn: University of Tennessee Press; 1987.
31. Alberts MJ, Bertels C, Dawson DV. An analysis of time of presentation after stroke. *JAMA.* 1990;263:65-68.
32. Ramashala MF. The state of the black elderly in Philadelphia. In: *The State of Black Philadelphia.* Philadelphia, Pa: Urban League; 1987.
33. The National Advisory Neurological Disorders and Stroke Council. *Implementation Plan Decade of the Brain.* Bethesda, Md: National Institute of Neurologic Diseases and Stroke; 1990.
34. Sullivan L. Report of National Black Leadership Initiative on Cancer. Presentation to the National Cancer Advisory Board; December 1988.
35. Menken M. The practice of neurology. *Arch Neurol.* 1990;47:1173.
36. Earnest MP. Access to health care in the United States: barriers for neurologic patients, challenges for neurologic physicians. *Neurology.* 1990;40:1815-1819.
37. *Education That Works: An Action Plan for the Education of Minorities: Quality Education for the Minorities Project.* Cambridge, Mass: Massachusetts Institute of Technology; 1990.
38. Olson CM. Health educators turn to black community's leaders, organizations, other strengths. *JAMA.* 1989;261:194-195.
39. Menken M. Caring for the uninsured and underinsured. *Arch Neurol.* 1991;48:23.
40. *Health Status of the Disadvantaged: Chartbook 1990.* Washington, DC: Dept of Health and Human Services; 1990.
41. Kurtzke JF. The current neurologic burden of illness and injury in the United States. *Neurology.* 1982;32:1207-1214.
42. World Health Organization. *Report of the WHO Task Force on Stroke and Other Cerebral Vascular Disorders: Stroke—1989.* Geneva, Switzerland: World Health Organization; 1989.
43. *Stroke 1990 Research Program NINDS.* Bethesda, Md: Dept of Health and Human Services 1990.
44. Broderick JP, Brott TG, Miller R, Huster G. Race and incidence of hemorrhagic stroke. *Stroke.* 1991;22:126. Abstract.
45. Sullivan L. Socio-economic impact and racial considerations. Presented at the Satellite Meeting of the Sixteenth International Conference on Stroke; February 21, 1991; San Francisco, Calif.

Freeze the Ocean

Robert J. Joynt, MD, PhD

The *Journal of the American Medical Association* and its family of specialty journals are addressing the issue of access to medical care. Matthew Menken presents a thoughtful look at this problem in a special article in this issue.¹ One of the major priorities in most industrialized nations is the provision of universal access to high-quality medical care at low cost. There have been varying degrees of success and many failures, and an ideal program has not been found. Certainly, the system in the United States has failed as there are millions of citizens who are underinsured or poorly insured. Basic desiderata just mentioned fall apart when other elements are deemed important, as instant and convenient access to care, free choice, unrationed care, finest technology, and adequate reimbursement for the providers (hospitals, physicians, nurses). There is then a trade-off, and, unfortunately in this country, it is universal access. Also, as Menken points out, the care even when available may not serve the patient's needs.

The medical care in the United States when at its best is likely unparalleled anywhere in the world. Certainly, it is the most expensive by far. But consistently, in surveys done in industrialized countries of the world, we are the least satisfied with our health care system.² The dissatisfaction does not arise from the quality of care but from the fear that we may not have the insurance or sufficient insurance when it is required. A fear that is not shared with citizens of other countries surveyed.

The Canadian system of health care has the highest satisfaction rating by its own citizens. It is also the system most admired by United States citizens. Even in Britain, which has the lowest cost per capita for health care, the satisfaction rate is higher than in this country.

At this time when we are critically evaluating our own system with the possibility of more government involvement, both the Canadian and British systems are showing major stresses. The Canadian government through the provinces is the single payer. The Canadian system saves a significant portion on administrative costs and global hospital budgeting.³ Payment to individual physicians is less, but disparity in income is not great as overheads due to billing costs and malpractice insurance are considerably less.⁴ Our idyllic view of the health system north of the border is now being questioned as more and more stresses appear in the Canadian system.⁵ Long waits for services, inconvenient services, inadequate access to technology, lack of innovative delivery systems, and provider discon-

tent are parts of the complaint. The transplantability of the system is also questioned, often along culture lines. A Canadian health official pointed out that Americans were paranoid about their government in that they did not trust it; on the other hand, the Canadians are schizophrenic in that they had a greater trust in government but felt the government went about it all wrong. However, there are many excellent features of their system such as global budgeting of hospitals and greater control of placement of expensive technology.

The British National Health System, again with universal access, has a fundamental difference from the Canadian system. The National Health System became both payer and provider by nationalizing the hospitals and employing the physicians. The system has evolved and has been modified since its inception in 1948. During the Thatcher years it came under increasing scrutiny, and in 1989 a government White Paper recommended major reforms.⁶ Many of the proposed reforms had the government lessening its control over hospitals and practitioners. What will evolve from this is yet to be seen, but major concerns about restriction in services have already arisen.

No system seems to have the perfect solution as Menken, quoting Mencken, suggests in his special article.¹ It is likely that we all know what is needed and desirable. We can land a man on the moon and put a bomb down a chimney from 10 000 feet, but these projects pale when we deal with the multifarious and diverse elements of the health care system. We are in the situation of the admiral who was asked what to do about the U-boat threat. He replied immediately, "Freeze the ocean. Those on the top can't go down. and those on the bottom can't come up." When asked how this would be accomplished, he replied, "I just set the policy, you work out the details." It is the details that will be difficult.

References

1. Menken M. Caring for the underserved: health insurance coverage is not enough. *Arch Neurol.* 1991;48:472-473.
2. Blendon RJ, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in ten nations. *Health Affairs.* Summer 1990;185-192.
3. Evans RG, Lomas J, Barer ML, Labelle RJ, et al. Controlling health expenditures: the Canadian reality. *N Engl J Med.* 1989;9:571-577.
4. Fuchs VR, Hahn JS. How does Canada do it? A comparison of expenditures for physicians' services in the United States and Canada. *N Engl J Med.* 1990;323:884-890.
5. Iglehart JK. Canada's health care system faces its problems. *N Engl J Med.* 1990;322:562-568.
6. Lister J. Reform of the British National Health Services. From White Paper to Bill in Parliament. *N Engl J Med.* 1990;322:410-412.

Accepted for publication January 30, 1991.

From the University of Rochester (NY) School of Medicine and Dentistry.

Reprinted from *Archives of Neurology* (1991;48:471).

Poverty and Psychiatric Status

Longitudinal Evidence From the New Haven Epidemiologic Catchment Area Study

Martha Livingston Bruce, PhD, MPH; David T. Takeuchi, PhD; Philip J. Leaf, PhD

● We assessed the effect of poverty on psychiatric status using two waves of New Haven (Conn) Epidemiologic Catchment Area data. Poverty was defined using federal poverty guidelines; psychiatric status was assessed by the Diagnostic Interview Schedule (DIS). When examining the course of healthy respondents at the first interview, respondents in poverty had a twofold-increased risk (controlling for demographic factors) for an episode of at least one DIS/DSM-III Axis I psychiatric disorder. Rates of most specific psychiatric disorders were comparably higher for respondents meeting poverty criteria compared with those not in poverty, although these differences were not always statistically significant. The effects of poverty did not differ by sex, age, race, or history of psychiatric episodes.

Poverty, a persistent problem in the United States, is associated with a range of economic and social problems.^{1,2} A well-documented correlate is the greater prevalence of mental health problems among lower socioeconomic groups.³⁻¹¹ Despite the large number of investigators and the consistency of their overall findings, questions remain about the nature of this association: (1) To what extent does poverty increase the risk of psychiatric episodes in healthy people? (2) How do the effects of poverty compare across a variety of psychiatric diagnoses? This study addresses these questions using longitudinal data from the New Haven (Conn) Epidemiologic Catchment Area (ECA) project to examine the risk of new (first or recurring) episodes of psychiatric disorders, as assessed by the Diagnostic Interview Schedule (DIS),^{12,13} in groups defined by poverty status according to federal poverty guidelines.

Most prior studies of the relationships between socioeconomic status and psychiatric disorders have employed cross-sectional data and are inappropriate for estimating the magnitude of poverty's effects on the onset or recurrence of psychiatric episodes. In contrast, the current study uses longitudinal data to examine (1) whether persons not experiencing a recent psychiatric episode are at greater risk for a future psychiatric episode if living in poverty, and (2) the prospective effect of poverty on mental status while controlling for respondents' reports about prior psychiatric episodes.

Only recently have researchers been able to specify the cross-sectional relationships between socioeconomic status and specific psychiatric disorders.⁶ In the past, community-based studies generally measured symptoms within the domain of a specific psychiatric disorder (in particular, depression¹⁴), aggregated measures of any psychopathologic conditions, or assessed the more general state of psychological distress or discomfort.¹⁵ Considerable variation exists in the epidemiologic variables and clinical manifestations of the different psychiatric disorders defined by *DSM-III*,¹⁶ suggesting that the relationship between poverty and any single measure should not be generalized across a range of psychiatric disorders. Moreover, because the prevalences of the specific disorders vary widely and there is a great deal of comorbidity among disorders, findings based on aggregate measures may well be weighted by the effects of the more prevalent disorders.

This study differs from other research on socioeconomic status and mental health by using federal guidelines to classify individuals as poor. Use of federally defined guidelines of poverty gives us the opportunity to examine the effects of socioeconomic status on mental health among a group already categorized as poor by government officials and already eligible for specific health and social service entitlement programs.

SUBJECTS AND METHODS

Data

Data for these analyses were collected as part of the first two waves of the New Haven ECA program. The ECA program is a collaborative multiwave study of the prevalence and incidence of major psychiatric disorders and the use of health and mental health services across five US sites.¹⁷ These analyses are confined to the New Haven data to take advantage of information on household composition unavailable at the other sites and to emphasize the distribution of poverty and psychiatric problems in a defined geographic area.

Beginning in July 1980, New Haven ECA interviews were obtained from a multistage probability sample of 5034 adults aged 18 years and older living in a 13-town region of the greater New Haven community. The methods used in the ECA project have been described in greater detail elsewhere.^{17,18} The initial interview had an overall response rate of 77%. Approximately 6 months following the first interview, 81% (4068) of the original sample were reinterviewed. Individuals who did not complete the second interview did not differ from those included in these analyses by sex, age, race, or psychiatric status; they were, however, more likely to be missing income information at

Accepted for publication May 31, 1990.

From the Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, Conn (Drs Bruce and Leaf); and the National Research Center for Asian-American Mental Health, UCLA (Dr Takeuchi). Dr Leaf is now with the Department of Mental Hygiene, The Johns Hopkins University, Baltimore, Md.

Reprinted from *Archives of General Psychiatry* (1991;48:470-474).

the first interview or to report incomes less than \$5000 per year. Among those without income information and among low-income respondents, completion of the second interview did not differ by psychiatric status.

The number of respondents used in the current analyses was further reduced from 4068 to 3497 for two reasons. First, we considered only black and non-Hispanic white respondents in the ECA ($n = 3958$). By restricting the analyses to these two groups, we maintained sufficient numbers to differentiate the effects of poverty from race on mental health. An additional 462 respondents were eliminated from the analyses because they did not report information on their 1980 household income. Individuals excluded from the analysis for lack of income information did not differ from those included by race, current psychiatric status, or welfare status; they were, however, more likely to be female and older than 45 years.

Measures

Poverty status at the first interview was determined by comparing each respondent's reported total 1980 household income and household composition with the 1980 poverty guidelines.¹⁹ The US poverty standard identifies families with inadequate economic resources to meet the daily demands of living. The poverty index uses a series of income thresholds set in relation to need, determined by family size, number of children, and age of householder.²⁰ These income thresholds are updated each year to correct for inflation. Total 1980 income (ie, when first interviewed) was assessed retrospectively at the second interview by asking respondents their "household's total income before taxes for the past year (1980), including salaries, wages, Social Security, welfare and any other income." Retrospective reporting allows for assessment of the total year's income (eg, from income tax forms) rather than asking for income at the first interview during the middle of that year. In contrast to the poverty guidelines, which are exact to the dollar level, the ECA respondents were asked their income at the nearest \$1000 level (income levels substantially above poverty levels were rounded at larger increments); individuals were classified "in poverty" if their household income was below the poverty guidelines level for their age and number in household, rounded up to the nearest \$1000.

Psychiatric status was assessed by the DIS, a semistructured interview administered by lay interviewers.^{12,13} The DIS assesses the presence, duration, and severity of symptoms and excludes symptoms due to physical illness or medication use. Computer algorithms use the data from the DIS to generate psychiatric diagnoses consistent with the *DSM-III*.¹⁶ These analyses examine eight Axis I psychiatric disorders or disorder groups assessed by the DIS and using *DSM-III* criteria without exclusions: alcohol abuse or dependence, bipolar disorder or mania, drug abuse or dependence, major depressive disorder, obsessive-compulsive disorder, panic disorder, phobia, and schizophrenic disorders (ie, schizophrenia or schizophreniform).

Our outcome measures of the eight DIS/*DSM-III* psychiatric disorder groups refer to meeting criteria for the DIS/*DSM-III* disorder at some point in the respondent's lifetime as well as reporting DIS symptoms for that disorder in the period between the first and second interviews (approximately 6 months). An aggregate measure

Table 1.—Distribution of Poverty in Greater New Haven Community*

Total	Sample Size		In Poverty, % of Total 7.9
	No. 3495	% 100.0	
Demographic variables			
Sex			
Male	1486	47.6	5.0
Female	2009	52.4	10.6
Age, y			
18-44	1242	55.3	7.7
45-64	607	30.9	6.1
65+	1646	13.8	13.2
Race			
White	3154	89.0	5.2
Black	341	11.0	30.3
Psychiatric status			
No recent DIS Axis I disorder	3064	85.2	7.1
Any recent DIS Axis I disorder	431	14.9	12.8

*DIS indicates Diagnostic Interview Schedule. Data are from New Haven (Conn) Epidemiologic Catchment Area. Sample numbers are unweighted. Percentages are weighted to the local population, not the total sample number.

of any of the disorders refers to meeting criteria (as defined above) for at least one of the psychiatric disorders at the second interview. To examine the effect of poverty at the first interview on subsequent psychiatric episodes among healthy people, individuals who met criteria for a psychiatric disorder within 6 months of their first interview were omitted from the analysis of each respective disorder. Among the remaining respondents, history was coded as having reported an episode of the respective disorder at any point in one's lifetime before the 6-month period before the first interview. In the analysis of the aggregate disorder variable, anyone reporting an episode of any of the eight DIS disorders within 6 months of the first interview was omitted from the analysis; history refers to past episodes of any of the disorders assessed.

Analysis

We first examined rates of each outcome variable stratified by poverty status. Next, multivariate logistic regression compared the risk of an episode between interviews for those in poverty with the risk for those not in poverty, controlling for demographic factors and psychiatric history. Demographic factors included sex, age (18 to 65 years vs 65 years and older), and race (white or black). The age categories were determined based on preliminary analyses. In the multivariate analyses, two-way interactions were tested between poverty and each demographic variable and with psychiatric history only on the effects of the most prevalent outcomes (ie, major depression, alcohol abuse, phobia, and the aggregate measure of psychiatric status). Population-attributable risk percent (PAR%) was calculated using the adjusted odds ratio (OR) as an estimate of relative risk (RR) and disorder-specific estimate of poverty in each at-risk group (p) in the following formula: $PAR\% = p(RR - 1) / [1 + p(RR - 1)]$.

Table 2.—Effects of Poverty on 6-Month Rate of Specific DIS/DSM-III Disorders or Disorder Groups*

	At Risk	Cases			Adjusted OR			PAR%
		All	Poor	Not Poor	A	B	C	
Any DIS Axis I disorder								
No.	3064	246	35	211	...	...	...	
Estimate, %		9.4	15.2	9.0	1.82†	1.92†	...	6.0
SE/95% CI		0.7	3.1	0.7	1.14-2.54	1.12-3.28	...	
Alcohol abuse/dependence								
No.	3389	66	9	57	...	...	...	
Estimate, %		3.0	5.7	2.8	2.10	2.25	2.41	9.7
SE/95% CI		0.5	2.5	0.5	0.82-5.42	0.98-5.16	0.99-5.89	
Bipolar/mania								
No.	3465	26	5	21	...	...	...	
Estimate, %		1.0	1.9	0.9	2.15	2.13	2.73	11.3
SE/95% CI		0.2	1.0	0.2	0.61-7.54	0.41-11.07	0.55-13.52	
Drug abuse/dependence								
No.	3461	14	2	12	...	...	...	
Estimate, %		0.7	1.0	0.6	1.52	2.82	3.27	14.5
SE/95% CI		0.2	0.7	0.2	0.31-7.40	0.70-11.30	0.77-18.16	
Major depression								
No.	3404	133	24	109	...	...	...	
Estimate, %		4.3	7.9	4.0	2.06†	2.29†	2.51†	10.4
SE/95% CI		0.5	0.2	0.4	1.05-4.04	1.19-4.43	1.32-4.78	
Obsessive-compulsive								
No.	3382	22	5	17	...	...	...	
Estimate, %		0.8	2.0	0.7	2.83	3.70	4.39	20.1
SE/95% CI		0.2	1.0	0.2	0.86-9.34	0.70-19.48	0.87-22.15	
Panic disorder								
No.	3402	12	1	11	...	...	...	
Estimate, %		0.3	0.4	0.3	1.27	1.17	1.23	1.7
SE/95% CI		0.1	0.4	0.1	0.17-9.50	0.09-15.81	0.09-17.53	
Phobia								
No.	3232	102	19	83	...	...	...	
Estimate, %		3.1	4.4	3.0	1.49	1.77	1.98†	6.7
SE/95% CI		0.04	1.3	0.4	0.82-2.73	0.97-3.22	1.07-3.65	
Schizophrenia								
No.	3467	4	3	1	...	...	...	
Estimate, %		0.1	1.5	<0.1	79.84§	...	...	...
SE/95% CI		0.1	0.9	<0.1	7.79-818.4	...	...	

*DIS indicates Diagnostic Interview Schedule; OR, odds ratio; PAR%, population-attributable risk percent (proportion of new episodes in the at-risk population resulting from poverty); and CI, confidence interval. Sample numbers are unweighted; estimates are weighted. Under adjusted OR, column A includes unadjusted OR; column B, OR adjusted for age, sex, race, and history of outcome diagnosis; and column C, OR comparing specific psychiatric disorder with disorder-free (DIS Axis I) respondents, adjusted for age, sex, race, and history of outcome diagnosis.

† $P < .05$.

‡ $P < .01$.

§ $P < .001$.

The data were weighted in all these analyses to compensate for household size and nonresponse and to reflect more accurately the age, sex, and race of the greater New Haven community.^{21,22} The complex sampling design and weighting strategy were considered in estimating SEs and conducting statistical tests by using Taylor Series Linearization with the RTILOGIT program.²³ When used with complex survey data, Taylor Series Linearization generally yields more conservative estimates of statistical significance than do procedures that assume simple random sampling.^{24,25}

RESULTS

As noted in the "Subjects and Methods" section, the subsamples used in these analyses omitted respondents who at the first interview met criteria for specific DIS/DSM-III disorders and reported symptoms within the previous 6 months (ie, recent cases). Before any respondents were omitted from the sample ($n = 3495$), the poverty rate for the greater New Haven community was estimated as 7.9%, comparable with the published poverty rate of 8% for the State of Connecticut in 1979.²⁶

The demographic characteristics of respondents and

Table 3.—Percentage of New Cases Meeting Criteria for Any Subclinical Symptoms (SCS) at First Interview*

	Poor		Nonpoor	
	Total Cases	% SCS	Total Cases	% SCS
Alcohol abuse/dependence	9	0.0	57	17.5
Bipolar/mania	5	20.0	21	28.6
Drug abuse/dependence	2	50.0	12	16.7
Major depression	24	12.5	109	11.0
Panic	1	0.0	11	18.2
Schizophrenia	3	0.0	1	0.0

*Data are unweighted; SCS for each disorder defined in text.

corresponding poverty rates are displayed in Table 1. Consistent with state and national trends,¹⁹ poverty was not equally distributed across demographic groups. Women, the elderly, and blacks had high rates of poverty; blacks in the New Haven ECA are almost six times more likely to be in poverty than whites. Psychiatric status at the first interview was differentially distributed by poverty status, with 12.8% of all recent cases falling within the poverty status, compared with 7.1% of noncases ($P < .01$).

Table 2 presents results from weighted logistic regression models predicting the effects of poverty on each of the specific DIS/DSM-III disorders and on the aggregate measure of psychiatric status. The table presents the between-interview rates of each disorder for individuals in the poverty and nonpoverty groups (among those who did not report an episode of the relevant disorder during the 6 months before the first interview). For each disorder, the risk of each episode by poverty status was compared using ORs; column A gives un-adjusted ORs, and column B adjusts the odds for demographic factors (age, sex, and race) as well as history of the disorder.

Among individuals who did not meet criteria for any of the eight DIS/DSM-III Axis I disorders at the first interview, 9.4% reported at least one of the disorders at the second interview. Respondents who met poverty status guidelines at the first interview were 1.82 times more likely than the nonpoor ($P < .05$) to meet criteria subsequently for a new DIS episode (column A). Adults in poverty were 1.92 times more likely than the nonpoor ($P < .05$) to report a new episode of at least one of the psychiatric disorders, controlling for demographic factors and history of a disorder (column B).

With the exception of schizophrenia, the unadjusted OR for the effect of poverty on the specific disorders ranged from 1.27 for panic disorder to 2.83 for obsessive-compulsive disorder (column A). Two of the relationships reached statistical significance: major depressive disorder ($OR = 2.06$, $P < .05$) and schizophrenia ($OR = 79.84$, $P < .001$). Although statistically significant, the number of new schizophrenia cases (four) was so low that the estimate of risk was viewed as preliminary and adjusted ORs were not estimated. Several of the other ORs, while not significant, exceeded 2.0, suggesting that low prevalences may have decreased the power of our observations: alcohol abuse ($OR = 2.10$), bipolar disorder or mania ($OR = 2.15$), and obsessive-compulsive disorder ($OR = 2.83$).

Adjusting the ORs to account for demographic factors and reported history of each disorder (column B) generally increased or minimally affected the observed relationship with poverty. The effects of poverty on alcohol abuse or dependence approached statistical significance ($OR = 2.25$; 95% confidence interval, 0.98 to 5.16), and the effects on major depression remained significant.

In the discussion above, the outcome measures compare individuals with a specific psychiatric disorder with the rest of the community, ie, with individuals who were either disorder free or who reported a different type of psychiatric disorder. This approach is comparable with many epidemiologic reports in the psychiatric literature and is, therefore, useful for comparative purposes. But because our findings indicate that poverty increases the risk of a variety of psychiatric disorders, our inclusion of disordered individuals into our comparison groups is likely to provide conservative estimates of the effects of poverty status on psychiatric illness. Column C of Table 2 presents the effects of poverty status on each disorder compared with meeting criteria for none of the other DIS/DSM-III disorders assessed; the ORs adjust for age, race, and sex as well as history of the disorder. As expected, the ORs increase. The table shows that poverty increased the OR for each disorder to approximately 2.0 or more, with the exception of panic disorder ($OR = 1.23$, not significant). The effect of poverty on major depression and phobia was statistically significant; the OR for alcohol was marginally significant.

We questioned whether these observed effects of poverty status on subsequent psychiatric episodes were consistent for subgroups as defined by sex, age, race, or psychiatric history. It was statistically feasible to test for such interactions only on the more prevalent disorders (ie, $>2.0\%$): alcohol abuse or dependence, major depression, phobia, and the aggregate measure. We observed no statistically significant interaction between poverty and any of the demographic factors with any of the four outcomes. A statistical interaction between history and poverty proved significant only for phobia ($P < .001$). In this case, the effect of poverty in the group reporting prior episodes of phobia was greater than twice that observed in the group without a history.

The impact of poverty on rates of new episodes of each psychiatric disorder is estimated in the final column of Table 2 using the PAR%. For the aggregate measure of disorder, 6% of all new cases occurring in the 6-month period to the at-risk population were a consequence of poverty in the population. Among the other disorders in which the effect of poverty approached significance, approximately 10% of new episodes of major depression, 10% of alcohol abuse, and 7% of phobia in the respective at-risk populations could be attributed to the effects of poverty. These figures indicate, for example, that during the 6-month interview period, more than 1200 new episodes of major depression in the greater New Haven adult population were a result of poverty.

Although persons who reported a recent psychiatric episode at the first interview were excluded from each analysis, it may still be possible that the poor included in the analysis were initially in worse mental health. We examined this question by comparing by poverty status the proportions of new cases who reported recent subclinical

symptoms at the first interview (Table 3). Subclinical conditions were defined as meeting criteria for at least one relevant *DSM-III* symptom group (bipolar and major depressive disorders) or *DSM-III* criteria (drug and alcohol abuse, panic, and schizophrenia) for the respective disorder within 6 months of the first interview. Subclinical conditions were not determined for phobia or obsessive-compulsive disorder because a single symptom in the DIS is sufficient to meet diagnostic criteria.

In general, most new psychiatric episodes did not occur to individuals reporting symptoms at the first interview. With the exception of drug abuse, where the single subclinical case represents half the new cases, 20% or less of the new cases in the poverty group reported subclinical symptoms at the first interview. These figures are comparable with, if not lower than, the nonpoor group, where 28.6% or less of the new cases reported subclinical symptoms at the first interview.

COMMENT

Longitudinal analyses of the New Haven ECA data indicate that individuals who meet poverty status guidelines are at increased risk for new episodes of psychiatric illness. Furthermore, the effects of poverty on psychiatric status are generally nonspecific; the poor are at increased risk for each of the specific disorders assessed except panic disorder, although not all of these relationships reach statistical significance. Nevertheless, the direction of effects is comparable, and the estimates reach a minimal magnitude. These increased risks remain even when controlling for history of episodes.

The effects of poverty on mental health are equally severe for the young and old, men and women, and blacks and whites. Our analyses of the aggregate measure of psychiatric status and alcohol abuse, major depression, and phobia revealed no statistical interactions between poverty status and age, sex, or race. Although the effects of poverty on mental health are comparable across subgroups of the population, the risk is far from equitable. Poverty is more prevalent among women than men, the old than the young, and blacks than whites. These analyses indicate that beyond the economic hardships, poverty also puts these groups at increased risk for mental or emotional problems.

Since lifetime diagnoses using the DIS have been the subject of criticism,^{27,28} we have not presented the effects of poverty status on first incidence of psychiatric disorders. We are confident that by omitting individuals who report recent episodes at the first interview, we were examining the effects of poverty on a group of individuals who at the time they reported poverty status were also reasonably healthy. Because of evidence of some underreporting of past episodes,²⁸ however, the effects of poverty on new episodes of each of the disorders while controlling for history may be exaggerated. We did omit all persons with any reported lifetime history of each respective disorder; the estimated ORs for the effect of poverty on each disorder except phobia are comparable with those reported in Table 2. The reduced effect of poverty on phobia is consistent with the interaction between poverty and history of phobic episodes reported earlier.

This study takes advantage of advances in psychiatric epidemiologic case identification and of a precisely defined indicator of socioeconomic status to generate further

support for the social causation hypothesis in the relationship between socioeconomic status and mental illness. Particularly important in this context is that poverty guidelines indicate more than personal income of an individual but also environmental and economic conditions for an entire household. A next step for future research is to investigate the aspects of poverty that affect psychiatric status. As noted recently by Dohrenwend,²⁹ an important goal of such research is to understand the linkages between the social phenomenon of poverty and individual experiences. Studies of individual processes are needed, for example, to determine the extent to which poverty increases the risk of mental disorders by increased exposure to negative events^{14,30} and whether the risk is greatest during the transition into poverty. Family studies³¹ are needed to determine whether our results are a by-product of generational drift of vulnerable families into poverty.

Although these analyses indicate that poverty affects the risk of a variety of psychiatric disorders, these findings might also be interpreted in light of the poor validity between the DIS and clinicians' diagnoses for many specific disorders and the relatively higher agreement for aggregate psychopathologic condition.^{32,33} It is possible that many of the DIS symptoms reported by the poor are indicative of a single syndrome related to the stress of living in an impoverished environment. For example, the repetitive behavior of persons diagnosed by the DIS with obsessive-compulsive disorder, a disorder with particularly poor validity, may reflect an attempt to remain safe in a dangerous neighborhood. Investigation into the nature of psychiatric problems for poor individuals assessed by the DIS as cases would further our understanding of psychiatric nosology and processes.

These analyses have addressed only one side of the question in the socioeconomic status-mental illness conundrum. The effects of psychopathologic condition on socioeconomic status continue to merit further investigation. Such an analysis is beyond the scope of this study, in part because our poverty measure may be inappropriate for this kind of investigation. Poverty status is a household measure, affected by earnings of all family members and by household composition. The effects of psychiatric problems on an individual's socioeconomic status are better assessed by using individual indicators such as personal income, educational attainment, job loss, or marital change.³⁴ These might change, yet poverty status could remain unaffected if the individual remains or becomes financially supported by other household members.

This study demonstrates that individuals with incomes below the federal poverty level are at increased risk for a number of psychiatric disorders. Since 1980, the percentage of adults living in poverty has not changed significantly.³⁵ What has changed is the availability of state-financed mental health services for the poor. In an effort to conserve scarce resources, states have targeted mental health services to individuals with severe and prolonged psychiatric illness at risk for hospitalization. While addressing an important public health need, this policy has also resulted in the de facto dismantling of many of the mental health services previously available to low-income individuals. Our findings indicate that poor populations would benefit from access to a full range of mental health prevention, early intervention, and treatment programs.

Furthermore, the utility of these programs will necessitate a better understanding of the role of poverty in precipitating or exacerbating psychiatric disorders.

The Yale ECA is supported by grant MH40603 from the National Institute of Mental Health, Rockville, Md. The ECA program was established as a series of five epidemiologic research studies performed by independent research teams in collaboration with the Division of Biometry and Epidemiology, NIMH. The five sites and their NIMH grants are Yale University, New Haven, Conn, U01 MH34224; Johns Hopkins University, Baltimore, Md, U01 MH33870; Washington University, St Louis, Mo, U01 MH33883; Duke University, Durham, NC, U01 MH35386; and UCLA, U01 MH35865. This study was also supported in part by NIMH training grant MH15783, grant MH44331, and NIMH FIRST award MH44984 (Dr Bruce).

References

1. Patterson JT. *America's Struggle Against Poverty: 1900-1980*. Cambridge, Mass: Harvard University Press; 1982.
2. Waxman CI. *The Stigma of Poverty: A Critique of Poverty Theories and Policies*. 2nd ed. Elmsford, NY: Pergamon Press Inc; 1983.
3. Dohrenwend BP, Dohrenwend BS. *Social Status and Psychological Disorder: A Causal Inquiry*. New York, NY: John Wiley & Sons Inc; 1969.
4. Faris REL, Dunham W. *Mental Disorders in Urban Areas*. Chicago, Ill: University of Chicago Press; 1939.
5. Hollingshead AB, Redlich FC. *Social Class and Mental Illness: A Community Study*. New York, NY: John Wiley & Sons Inc; 1958.
6. Holzer CE, Shea B, Swanson JW, Leaf PJ, Myers JK, George L, Weissman MM, Bednarski P. The increased risk for specific psychiatric disorders among persons of low socioeconomic status. *Am J Soc Psychiatry*. 1986;6:259-271.
7. Langer TS, Michael ST. *Life Stress and Mental Health*. New York, NY: Free Press; 1963.
8. Leighton DC, Harding JS, Macklin DB, MacMillan AM, Leighton AH. *The Character of Danger: Psychiatric Symptoms in Selected Communities*. New York, NY: Basic Books Inc Publishers; 1963.
9. Link B, Dohrenwend BP. Formulation of hypotheses about the true prevalence of demoralization in the United States. In: Dohrenwend BP, Dohrenwend BS, Gould MS, Link B, Neugebauer R, Wunsch-Hitzig E, eds. *Mental Illness in the United States: Epidemiologic Estimates*. New York, NY: Praeger Publishers; 1980:114-132.
10. Myers JK, Bean LL. *A Decade Later: A Follow-up of Social Class and Mental Illness*. New York, NY: John Wiley & Sons Inc; 1964.
11. Srole L, Langer TS, Michael ST, Opler MK, Rennie TAC. *Mental Health in the Metropolis: The Midtown Manhattan Study*. New York, NY: McGraw-Hill International Book Co; 1962.
12. Robins LN, Helzer JE, Croughan J, Ratcliff KS. National Institute of Mental Health Diagnostic Interview Schedule: its history, characteristics, and validity. *Arch Gen Psychiatry*. 1981;38:381-389.
13. Robins LN, Orvaschel H, Anthony JC, Blazer DG, Burnam A, Burke JD. The Diagnostic Interview Schedule. In: Eaton WW, Kessler LG, eds. *Epidemiologic Field Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program*. Orlando, Fla: Academic Press Inc; 1985:143-170.
14. Brown G, Harris TO. *Social Origins of Depression: A Study of Psychiatric Disorder in Women*. New York, NY: Free Press; 1978.
15. Kessler RC, Cleary P. Social class and psychological distress. *Am Soc Rev*. 1980;45:463-478.
16. American Psychiatric Association, Committee on Nomenclature and Statistics. *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*. Washington, DC: American Psychiatric Association; 1980.
17. Eaton WW, Kessler L, eds. *Epidemiologic Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program*. Orlando, Fla: Academic Press Inc; 1985.
18. Leaf PJ, Myers JK. Procedures used in the epidemiologic catchment area studies. In: Robins L, Regier D, eds. *Psychiatric Disorders in America*. New York, NY: Free Press; 1991:11-32.
19. *Characteristics of the Population Below the Poverty Level: 1980*. Washington, DC: Bureau of the Census; 1982. US Dept of Commerce Current Population Reports series P-60 publication 133.
20. O'Hare WP. Poverty in America: trends and new patterns. *Popul Bull*. 1989;49:1-45.
21. Holzer CE, Spitznagel E, Jordan KB, Timbers DM, Kessler LG, Anthony JC. Sampling the household population. In: Eaton WW, Kessler LG, eds. *Epidemiologic Field Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program*. Orlando, Fla: Academic Press Inc; 1985:23-48.
22. Holt D, Smith TMF. Poststratification. *J R Stat Soc A*. 1977;142:33-66.
23. Shah BV, Folsom RE, Harrell FE, Dillard CN. *RTILOGIT: Procedure for Logistic Regression on Survey Data*. Cary, NC: Research Triangle Institute; 1987.
24. Freeman DH, Bruce ML, Leaf PJ, Berkman L. Sampling strategies for studying older populations. In: Wallace RB, Woolson RC, eds. *Methodological Issues in the Epidemiologic Study of Elderly*. New York, NY: Oxford University Press. In press.
25. Bruce ML, Freeman DH, Leaf PJ. Use of SAS procedures for estimating design based logistic regression variances by balanced repeated replication. In: *SAS Users Group International Proceedings of the Twelfth Annual Conference*. Cary, NC: SAS Inc; 1987:1066-1070.
26. *Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means*. Washington, DC: US House of Representatives, Committee on Ways and Means; 1989. US House of Representatives Committee on Ways and Means publication WMCD 101-4.
27. Parker G. Are the lifetime prevalence estimates in the ECA study accurate? *Psychol Med*. 1987;17:275-82.
28. Eaton WW, Kramer M, Anthony JC, Dryman A, Shapiro S, Locke BZ. The incidence of specific DIS/DSM-III mental disorders: data from the NIMH Epidemiologic Catchment Area Program. *Acta Psychiatr Scand*. 1989;79:163-178.
29. Dohrenwend BP. Socioeconomic status (SES) and psychiatric disorders. *Soc Psychiatry Psychiatr Epidemiol*. 1990;25:41-47.
30. Kessler RC, McLeod JD. Sex differences in vulnerability to undesirable life events. *Am Soc Rev*. 1984;49:620-631.
31. Weissman MM, Merikangas KR, John K, Wickramaratne P, Prusoff BA, Kidd KK. Family-genetic studies of psychiatric disorders: developing technologies. *Arch Gen Psychiatry*. 1986;43:1104-1116.
32. Anthony JC, Folstein M, Romanoski AJ, VonKorff MR, Nestadt GR, Chahal R, Merchant A, Brown H, Shapiro S, Kramer M, Gruenberg EM. Comparison of the lay Diagnostic Interview Schedule and a standard psychiatric diagnosis. *Arch Gen Psychiatry*. 1985;42:667-675.
33. Helzer JE, Robins LN, McEvoy LT, Spitznagel EL, Stoltzman RK, Farmer A, Brockington IF. A comparison of clinical and Diagnostic Interview Schedule diagnoses. *Arch Gen Psychiatry*. 1985;42:657-666.
34. Mullahy J, Sindelar J. Life-cycle effects of alcoholism on education, earnings, and occupation. *Inquiry*. 1989;26:272-282.
35. *Poverty in the United States 1987*. Washington, DC: US Bureau of the Census; 1989. US Dept of Commerce Current Population Reports series P-60 publication 163.

Mental Health Needs of the Uninsured

Grayson Norquist, MD, MSPH, Kenneth Wells, MD, MPH

● As many as 37 million Americans have no medical insurance, but no data exist on the mental health needs of community samples of the uninsured. Using interview data from a household sample in Los Angeles, we found that the uninsured had a higher prevalence of serious psychiatric disorder (16%) than those with private health insurance (12%), but had a prevalence similar to those with Medicaid (18%). Access to mental health services among those with a psychiatric disorder was similar in the uninsured (14.5%) and those with private insurance (18%) but was less than those with Medicaid coverage (42%). These results indicate that the uninsured have a great potential need for mental health services and that access might be improved through insurance plans such as Medicaid. However, further study is needed to determine the adequacy and quality of services provided under Medicaid and whether such a plan would improve access for an uninsured population such as the one studied here.

According to recent studies, approximately 7% to 13% of the US population (22 to 37 million people) are not covered by any type of health insurance,^{1,2} and as many as 43 million may be uninsured for some period during the year.³ The employed uninsured and their dependents make up the largest component of the uninsured group, and young, poor workers are the most likely to be uninsured.⁴ Recently, some states have proposed and implemented plans to provide health coverage for the uninsured based on mandatory insurance coverage for all workers.

Studies from the late 1970s at the National Center for Health Statistics (Hyattsville, Md) indicated that uninsured persons were more physically ill than those with insurance.³ Others have shown that the loss of health insurance benefits (eg, Medicaid) can result in a worsened physical health status for those who previously had health insurance.⁵ However, no community-based studies have estimated the extent of psychiatric disorder among the uninsured. Such estimates would be useful in designing benefit packages or planning services for the uninsured. In addition, estimates are needed on the use of mental health services by the uninsured, particularly those with psychiatric disorders, as a proxy measure of the extent of unmet need in this population.

In this article, we address these issues using data from the Los Angeles (Calif) site of the National Institute of Mental Health (NIMH) Epidemiologic Catchment Area

Study. Because Hispanics were oversampled in the Los Angeles site, we were able to separately estimate the effects of insurance status and ethnicity on the probabilities of having a psychiatric disorder and of using mental health services. This presented an important opportunity, as previous studies have shown Hispanics to be less likely to use specialty mental health services than non-Hispanics, and recent Hispanic immigrants would be expected to constitute a large segment of the Los Angeles uninsured population.⁶

MATERIALS AND METHODS

Sample

Data were obtained from the first wave of the Los Angeles NIMH Epidemiologic Catchment Area survey conducted in 1983; the characteristics of this site have previously been described.^{7,8} Sampling was performed with a two-stage probability design with a final sample size of 3057 respondents. The completion rate for the survey was 69%, a response rate comparable with those in previous surveys conducted in Los Angeles.⁹

We determined insurance coverage through responses to five items and categorized respondents into four insurance groups: Medicare enrollees (Medicare); members of private fee-for-service plans and health maintenance organizations (HMOs) (Private); those in public-supported entitlement plans (Medicaid); and the uninsured. A hierarchical system prevented overlap in groups by placing an individual in one and only one group. If a respondent was a member of an HMO ($n=410$), then he or she was placed in the Private group; after classifying those respondents, enrollees in Medicare were placed in the Medicare group ($n=328$); next, the Medicaid group was composed ($n=221$); then, those with private fee-for-service insurance ($n=1400$) were added to the Private group; finally, the remainder of respondents were placed in the uninsured group ($n=698$). Thus, the privately insured group (Private) used in the analysis reported here consisted of all those with private fee-for-service insurance and all HMO enrollees.

The present study focuses on the uninsured and compares them with those with private insurance (fee-for-service combined with HMO enrollees) and with those with Medicaid coverage. The Medicaid group was included for two reasons: first, they represent those under a government plan that has been suggested as a potential way of covering all uninsured who are unemployed; and second, previous reports have shown them to have a higher prevalence of psychiatric disorder.^{10,11} The Medicare group was not included because we wanted to compare the uninsured population with a population of similar age. Some data presented here for the privately insured and those with Medicaid have been reported previously.¹²

Accepted for publication February 14, 1991.

From the Division of Applied and Services Research, National Institute of Mental Health, Rockville, Md (Dr Norquist), and the Department of Psychiatry and Behavioral Sciences, UCLA School of Medicine (Dr Wells).

Reprinted from *Archives of General Psychiatry* (1991;48:475-478).

Sources of Data

The Diagnostic Interview Schedule (DIS),¹³ a structured questionnaire using lay interviewers to collect data from respondents, was used to determine the presence of psychiatric disorders comparable with those defined in the *DSM-III*. A Spanish language version was available for subjects whose primary language was Spanish.¹⁴ All diagnoses reported here were present in the 6 months preceding the 1983 interview.

Not all diagnoses listed in the *DSM-III* are covered by the DIS. Disorders identified by the DIS differ in their severity (ie, impact on functioning or presence of psychotic symptoms) and in the potential for response to treatment. Because we were particularly interested in examining differences in prevalence of serious and highly treatable disorders, prior to data analysis, we developed an indicator of such serious disorders. We categorized schizophrenic disorders, all affective disorders, alcohol and substance abuse, obsessive-compulsive disorder, and panic disorder as serious and treatable disorders. We excluded antisocial personality disorder, cognitive impairment, and phobia. Although we recognize that phobias can be both serious and treatable, many of the common phobias identified in a general population by the DIS may be mild. Because previous reports from the Epidemiologic Catchment Area study have used a summary variable for any DIS psychiatric disorder, the findings for that variable were also analyzed and reported here as "any DIS disorder" to allow comparison with previous reports.

We used scores obtained through the Center for Epidemiologic Studies Depression Scale as a measure of psychopathologic severity.¹⁵ This scale is considered by some as an indicator of general "psychological distress," rather than a discrete measure of depression.¹⁶

The following categories of places used for outpatient mental health services are defined by type of provider, as described by Shapiro et al¹⁷: (1) specialty mental health resources (psychiatrists, psychologists, psychiatric social workers, mental health counselors, mental health centers, and drug treatment centers); (2) general medical resources (medical care practitioners and hospital emergency departments); and (3) other human service resources (clergy, family service agencies, crisis centers, spiritualists, and natural therapists).

Statistical Analysis

Data were weighted to account for differential sampling probabilities and adjusted for age and sex (the Private group was used as the reference). The utilization data were generated using SESUDAAN, a computer program that estimates standard errors of proportions and means for complex sample surveys.¹⁸ We used a logistic regression model to examine unique associations between insurance types and either prevalence of psychiatric disorder or use of mental health services while controlling for other factors. Because the logistic regression model assumes simple random sampling, the χ^2 values obtained with it were corrected for the clustered sampling design by using values obtained from a survey regression program.^{19,20}

RESULTS

Demographics

Table 1 lists the demographic characteristics of the Private, Medicaid, and uninsured groups. Uninsured respondents were primarily young, uneducated, and His-

Table 1.—Demographic Characteristics of Each Group*

	Private (n = 1810)	Medicaid (n = 221)	Uninsured (n = 698)
Age, y	37 (0.9)	39 (2.5)	34 (1.3)
Women, %	50 (1.2)	64 (3.8)†	49 (2.1)
<12 y Education, %	46 (1.1)	79 (2.7)†	72 (1.6)†
Good to excellent health, %	85 (1.0)	60 (4.1)†	77 (1.8)†
% Hispanic	42 (1.3)	68 (3.2)†	72 (1.5)†

*Values are means ($\pm$ SEs).

†P<.001 compared with the Private group.

Table 2.—Proportion of Enrollees Within Each Group With a Serious Disorder, Any Disorder, or Any Physical Limitation*

	Serious Disorder	Any Disorder	Physical Limitation
Private, %	12 (0.7)	17 (0.9)	11 (0.9)
Medicaid, %	18 (2.8)†	29 (3.3)‡	29 (3.3)§
Uninsured, %	16 (1.6)†	21 (1.8)	14 (1.3)

*Values are means ($\pm$ SEs).

†P<.05 compared with the Private group.

‡P<.005 compared with the Private group.

§P<.001 compared with the Private group.

panic. The Medicaid respondents were similar to the uninsured, but were more likely to be women. Although not shown in Table 1, we also analyzed employment data for respondents. Of those respondents with a serious psychiatric disorder, 81% of the Private, 54% of the uninsured, and 27% of the Medicaid groups were employed. Over 85% of employed respondents with serious psychiatric disorders in the Private and uninsured groups were working full time, but only 67% of the employed Medicaid respondents with serious psychiatric disorders were full-time employees.

The majority of Hispanic respondents in the Medicaid group were US-born, while Hispanics in the uninsured group were more likely to be foreign-born. As an indicator of acculturation, we determined the percentage of respondents whose primary language was Spanish. Six percent of the privately insured respondents spoke primarily Spanish, but 12% of the Medicaid and 12% of the uninsured respondents used Spanish as their first language, indicating less acculturation in the latter two groups than in the Private group.

Prevalence of Psychiatric Disorder

Table 2 reports the proportion of respondents with a significant and treatable DIS/*DSM-III* psychiatric disorder (serious disorder) and the percentage of respondents within each group who had any DIS/*DSM-III* psychiatric disorder (any disorder) within the preceding 6 months.

Medicaid respondents had a higher prevalence of any DIS/*DSM-III* psychiatric disorder, but both the Medicaid and uninsured groups had a significantly greater prevalence of serious psychiatric disorder than the Private group. Nonetheless, the majority (54%) of respondents with a serious psychiatric disorder had private insurance, 17% were insured through Medicaid and Medicare (10%

Table 3.—Proportion With Serious Psychiatric Disorder That Used Each Sector*

	General Medical Sector	Specialty Mental Health Sector	Human Services Sector	General Medical or Specialty Sector
Private, %	5.5 (1.6)	15.0 (2.3)	6.2 (1.5)	18.1 (2.8)
Medicaid, %	4.1 (1.9)	38.7 (7.8)†	9.6 (5.7)	41.8 (7.9)†
Uninsured, %	8.1 (3.1)	9.9 (3.1)	8.8 (3.0)	14.5 (3.5)

*Values are means ($\pm$ SEs).† $P < .005$ compared with the Private group.**Table 4.—Number of Visits to Each Sector by Those With a Serious Psychiatric Disorder***

	General Medical Sector	Specialty Mental Health Sector
Private†	3.6 (0.5)	10.3 (1.3)
Medicaid	3.6 (2.0)	14.0 (4.8)
Uninsured	5.3 (2.2)	6.5 (2.0)

*Values are means ($\pm$ SEs).

†Excludes HMO enrollees (see text).

and 7%, respectively), and 29% were uninsured, indicating that a large segment of those with significant and treatable psychiatric disorder were uninsured. Consistent with the "health" variable reported in Table 1, the Medicaid group was more physically limited.

When the effects of other factors (sex, age, ethnicity, employment, education, and physical health) were controlled by using multiple logistic regression, the Medicaid and uninsured groups still had a significantly greater prevalence of serious psychiatric disorder than those with private insurance (χ^2 for Medicaid, 6.26, $df=1$, $P<.01$; χ^2 for uninsured, 7.53, $df=1$, $P<.01$). Among those in the Private or uninsured groups with a serious psychiatric disorder, there was no significant difference in the level of psychological distress (ie, severity) as assessed by the Center for Epidemiologic Studies Depression score. However, the Medicaid group had more psychological distress than those two groups combined. Twenty-six percent of the uninsured/Private sample scored 16 or more, indicating psychological distress, while 67% of the Medicaid sample scored at this level.

Utilization Data

Table 3 presents utilization data for outpatient mental health services by insurance groups for those respondents with serious psychiatric disorder. The proportion of those who used either the general medical or specialty mental health sector within the preceding 6 months (last column) did not differ between the uninsured and the Private groups. However, the Medicaid group had more than twice the proportion of respondents who had used an outpatient mental health service within the preceding 6 months. When the different sectors were considered individually, use of the specialty mental health sector accounted for this finding in the Medicaid group. Ethnicity and other factors (sex, age, education, unemployment, and psychiatric disorder) known to affect the use of the specialty mental health sector were controlled by using multiple logistic regression, and those with Medicaid remained the only group more likely to use specialty mental

health services than those in the Private group.

Table 4 shows the mean number of outpatient visits for mental health care among subjects with a serious psychiatric disorder who used services. We have previously reported that enrollees with serious mental disorders in private fee-for-service plans and HMOs do not differ in their access to mental health care but do differ in the mean number of visits to providers of mental health care.¹² Therefore, when we compared the mean number of visits between the groups we broke down the Private group into the fee-for-service and HMO subgroups to determine if that affected the comparison with the uninsured. In Table 4, the Private group consists only of the fee-for-service enrollees. There was no statistically significant difference between them and the uninsured in the mean number of visits to either the general medical sector or the specialty mental health sector for mental health care. When the uninsured were compared with HMO enrollees (6.5 visits for general medical sector and 1.6 for specialty sector), there also was no statistically significant difference.

COMMENT

To our knowledge, data from our study represent the first community data on the prevalence of psychiatric disorder and use of mental health services in the uninsured. Our findings are consistent with those of previous reports describing the uninsured population as primarily young, minority workers.^{1-4,21} Although previous reports have estimated that as many as 13% of the population may be uninsured, in this Los Angeles sample 23% were uninsured.¹ One explanation for the larger number of uninsured respondents in the Los Angeles Epidemiological Catchment Area site sample was the inclusion of a large number of recent Hispanic immigrants.

Because some states are considering mandatory health benefits for all employees, we thought it particularly important to describe employment status of the uninsured. Other studies have shown that 39% of the uninsured are full-time employees and 17% are part-time employees.^{4,22} We found that a large segment (54%) of the nonelderly uninsured population with serious mental illness would remain without insurance if plans to cover them required full employment, and about 46% would be uninsured even if part-time employment were sufficient to obtain health coverage. Thus, in areas such as Los Angeles, providing mental health coverage to the uninsured with psychiatric disorders will require strategies in addition to mandated insurance coverage for employees. These options might include extension of Medicaid benefits to those who are unemployed and uninsured.

We found that the uninsured population had a higher prevalence of serious psychiatric disorder than those with

private insurance, but had a prevalence similar to those with Medicaid. These findings indicate that the uninsured population has a potentially greater need for psychiatric services than those with private insurance and emphasize the importance of including psychiatric benefits in any plans to provide insurance coverage for the uninsured. However, our findings also suggest that severity of illness, as measured by the Center for Epidemiological Studies Depression Scale, is somewhat lower for the uninsured and Private groups than for the Medicaid population. Thus, one might not necessarily anticipate the same level of use of mental health services in the uninsured as was observed here for the Medicaid population if the uninsured were to be covered under a Medicaid program, but further studies with better measures of severity are needed.

Some have questioned the validity of the DIS.²³ If the DIS improperly estimated psychiatric diagnoses, then our prevalence data might be incorrect. However, others have shown it to be valid for most psychiatric disorders it estimates, and it remains the best instrument available for field studies of psychiatric epidemiologic disorders.²⁴

We expected the uninsured group with serious psychiatric disorders to have less access to mental health care, but the proportion who used either the general medical or specialty mental health sectors was not significantly different from that of those who had private insurance. This was true when we controlled for ethnicity and for other factors (sex, age, education, unemployment, and psychiatric disorder) known to affect the use of mental health services. Even when we looked at the mean number of visits to the specialty mental health sector for those with serious psychiatric disorders, there was no statistically significant difference between the uninsured and those with private insurance (regardless of whether the Private group was split into fee-for-service and HMO enrollees). However, our precision was relatively low for the comparison of use among those with a psychiatric disorder who were uninsured or privately insured. There could have been a moderate difference in access that we were not able to detect statistically.

What we do not know from our study is the type of mental health service or the adequacy of the service received by the uninsured. Los Angeles County at the time of the survey had a network of clinics that provided mental health services at reduced fees or no cost to those without funds. Thus, if publicly funded mental health services had not been available, it is possible that the uninsured would have shown less use of mental health services. This is a particularly important issue to address in future research, since Los Angeles County has recently decreased the mental health services provided in public clinics.

Medicaid recipients were almost twice as likely to use mental health services as either those with private insurance or those without insurance, and differences remained even after controlling for differences in prevalence of psychiatric disorder. Those with Medicaid may have fewer barriers to access. Alternatively, we may not have sufficiently controlled for differences in severity of illness. Future studies should compare these groups using more comprehensive measures of severity of illness.

If Medicaid does increase access to mental health services, as others have also reported, then extension of Med-

icaid coverage to the uninsured might be a reasonable policy option for meeting the needs of the uninsured with psychiatric disorders, especially those who are unemployed.²⁵ However, the quality and adequacy of mental health services delivered under the Medicaid system may not be sufficient, and future studies will need to address this issue.²⁶

This research was supported by the Epidemiologic Catchment Area Program, Los Angeles, Calif. The Epidemiologic Catchment Area is a series of five epidemiologic research studies performed by independent research teams in collaboration with the staff of the Division of Biometry and Epidemiology of the National Institute of Mental Health (NIMH), Rockville, Md. The NIMH principal collaborators were Darrel A. Regier, MD, MPH, Ben Z. Locke, MSPH, and Jack D. Burke, Jr, MD, MPH; the NIMH project officer was William J. Huber. The principal investigators and coinvestigators from the five sites were as follows: Yale University, New Haven, Conn (supported by cooperative agreement MH-34224): Jerome K. Myers, PhD, Myrna M. Weissman, PhD, and Gary L. Tischler, MD; The Johns Hopkins University, Baltimore, Md (MH-33870): Morton Kramer, ScD, and Sam Shapiro; Washington University, St Louis, Mo (MH-33883): Lee N. Robins, PhD, and John E. Helzer, MD; Duke University, Durham, NC (MH-35386): Dan Blazer, MD, PhD, and Linda K. George, PhD; and UCLA (MH-35865): Marvin Karmo, MD, MSPH, Richard L. Hough, PhD, Javier I. Escobar, MD, M. Audrey Burnam, PhD, and Dianne M. Timers, PhD.

This study was also supported in part by the NIMH and by the Health Care Financing Administration through the RAND Corp (Santa Monica, Calif)/Health Care Financing Administration (Baltimore, Md) Policy Center.

The opinions expressed in this article are those of the authors and do not represent the opinions or policy of any agency of the US Government.

References

1. Wilensky GR. Viable strategies for dealing with the uninsured. *Health Affairs*. 1987;6:33-46.
2. Weisfeld VD, ed. *Robert Wood Johnson Foundation Special Report*. Princeton, NJ: Robert Wood Johnson Foundation Communications Office; 1987;2.
3. Davis K, Rowland D. Uninsured and underserved: inequities in health care in the United States. *Milbank Memorial Fund Q*. 1983;61:149-176.
4. Monheit AC, Hagan MM, Berk ML, Farley PJ. The employed uninsured and the role of public policy. *Inquiry*. 1985;22:348-364.
5. Lurie N, Ward NB, Shapiro MF, Brook RH. Terminations from Medi-Cal: does it affect health? *N Engl J Med*. 1984;311:480-484.
6. Hough RL, Landsverk JA, Karno M, Burnam MA, Timbers DM, Escobar JI, Regier DA. Utilization of health and mental health services by Los Angeles Mexican Americans and non-Hispanic whites. *Arch Gen Psychiatry*. 1987;44:702-709.
7. Eaton WW, Holzer CE, Von Korff M, Anthony JC, Helzer JE, George L, Burnam MA, Boyd JA, Kessler LG, Locke BZ. The design of the Epidemiologic Catchment Area Surveys. *Arch Gen Psychiatry*. 1984;41:942-948.
8. Burnam MA, Hough RL, Escobar JI, Karno M, Timbers DM, Telles CA, Locke BZ. Six-month prevalence of specific psychiatric disorders among Mexican-Americans and non-Hispanic whites in Los Angeles. *Arch Gen Psychiatry*. 1987;44:687-694.
9. Frerichs RR, Aneshensel CS, Clark VA. Prevalence of depression in Los Angeles County. *Am J Epidemiol*. 1981;113:691-699.
10. Shapiro S, Skinner EA, Kramer M, Steinwachs DM, Regier DA. Measuring need for mental health services in a general population. *Med Care*. 1985;23:1033-1043.
11. Taube CA, Kessler LG, Burns BJ. Estimating the probability and level of ambulatory mental health services use. *Health Services Res*. 1986;21:321-339.
12. Norquist GS, Wells KB. How do HMOs reduce outpatient mental health care costs? *Am J Psychiatry*. 1991;148:96-101.

13. Robins LN, Helzer JE, Croughan J. National Institute of Mental Health Diagnostic Interview Schedule. *Arch Gen Psychiatry*. 1981;38:381-389.
14. Burnam AM, Karno M, Hough RL, Escobar JJ, Forsythe AB. The Spanish DIS: reliability and comparison with clinical diagnoses. *Arch Gen Psychiatry*. 1983;40:1189-1196.
15. Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Meas*. 1977;1:385-401.
16. Vernon SW, Roberts RE. Measuring nonspecific psychological distress and other dimensions of psychopathology. *Arch Gen Psychiatry*. 1981;38:1239-1247.
17. Shapiro S, Skinner EA, Kessler LG, Von Korff M, German PS, Tischler G, Leaf PJ, Benham L, Cottler L, Regier DA. Utilization of health and mental health services. *Arch Gen Psychiatry*. 1984;41:971-978.
18. Shah BV. *SESUDAAN: Standard Errors Program for Computing of Standardized Rates from Sample Survey Data*. Research Triangle Park, NC: Research Triangle Institute; 1981.
19. Holt MM. *SURREGR: Standard Errors of Regression Coefficients from Sample Survey Data*. Research Triangle Park, NC: Research Triangle Institute; 1977.
20. Leaf PJ, Livingston MM, Tischler GL, Weissman MM, Holzer CE, Myers JK. Contact with health professionals for the treatment of psychiatric and emotional problems. *Med Care*. 1985;23:1322-1335.
21. Ries P. Health care coverage by age, sex, race, and family income: United States, 1986. *Advancedata*. 1987;139:1-8.
22. Baldwin MF. Who will pay indigents' bill? *Mod Health Care*. 1987;12:26-35.
23. Anthony JC, Folstein M, Romanoski AJ, Von Korff MR, Nestadt GR, Chohal R, Merchant A, Brown H, Shapiro S, Kramer M, Gruenberg EM. Comparison of the lay Diagnostic Interview Schedule and a standardized psychiatric diagnosis. *Arch Gen Psychiatry*. 1985;42:667-675.
24. Burke JD. Diagnostic categorization by the Diagnostic Interview Schedule (DIS): a comparison with other methods of assessment. In: Barrett J, Rose RM, eds. *Mental Disorders in the Community: Findings From Psychiatric Epidemiology*. New York, NY: Guilford; 1986.
25. Taube CA, Rupp A. The effect of Medicaid on access to ambulatory mental health care for the poor and the near-poor under 65. *Med Care*. 1986;24:677-686.
26. Ginzberg E. Medical care for the poor: no magic bullets. *JAMA*. 1988;259:3309-3311.

The Dilemma of the Uninsured and Underinsured

Marvin Young, MD

Providing care for the more than 30 million uninsured and more than 25 million seriously underinsured Americans is an urgent problem of great dimension that demands innovative thought and commitment to solution. The Journal of the American Medical Association will publish a special theme issue dedicated to this topic on May 15, 1991, which will contain a series of proposals concerning access to medical services, financing methods, and sources of revenue for the delivery of care. All of the nine American Medical Association specialty journals, functioning as a consortium, also contain articles and editorials in their May issues. This editorial was written by Marvin Young, a Seattle dermatologist and president of the Washington State Medical Association. These views are those of the Washington State Medical Association as presented to the private sector working group, a medicine, business, and insurance group dedicated to preserving a private solution to the problems of health care access and cost.

Kenneth A. Arndt, MD
Editor

The difficulties of the medically uninsured and underinsured are only one part of a greater problem evident to anyone in the United States today. People simply feel that medical care costs too much, despite the fact that most Americans have much of their health insurance paid by their employers. More and more the media tell us that our infant mortality, longevity, and other measures of health status rank us lower than other industrialized nations of the world, even though we spend more of our gross national product on health care than any of these same countries. Paradoxically, we are also the foremost exporter of new medical information and technology to the rest of the world.

The problem of access to care is viewed by the public simply as one of cost. Our population is conditioned to believe that modern technology will substitute for unhealthy life-styles, abuse of drugs and alcohol, and a multitude of social problems. Furthermore, society believes that all Americans have the right to have unlimited access to lifesaving care.

Imposition of a Canadian-style, single-payer governmental system of health care is seen by many as the appropriate solution to these problems. Yet the average American's trust of government seems to fade when we mention the savings-and-loan debacle, the postal service, and the less than dynamic behavior of our Congress. Whatever health care solution we adopt, it must conform

with the values of American society to obtain wide public acceptance.

The physicians of Washington State have been working with a collaborative group of large and small businesses, hospitals, and insurance companies in response to a legislatively mandated Commission on Health Care Cost and Access, which is seeking a solution to the dilemma. Understood by all involved is the fact that each group must relinquish some autonomy to attain a solution. The process has not come to closure as yet, but the rest of this article describes the changes that physicians would like implemented in our state.

Since society apparently does not wish to provide everything for everyone, the proposed health care system would be divided into four tiers, with different financing for each section. The first, the "wellness" tier, would consist of low-cost, outcome-proved measures to be applied across the entire state population. Immunizations would be an obvious example.

The second tier would include primary access to a physician for emergency care, simple diagnosis and treatment, and those services that are considered most basic by the public. Prenatal care would fit in this category. A catastrophic coverage package would also be included after an income-related deductible. Covered services in this tier would optimally be those found most cost-effective by outcome-proved research, such as defined in the *Guide to Clinical Preventive Services*.¹

The third tier would include most of the remaining medical services that we now deliver. Many dermatological services that I would call "quality of life" would be here. Those strictly cosmetic services would be in a fourth tier, probably not covered in most plans, as at present. The first requirement for the plan is improvement in cost control, so the obvious questions are "Where is the savings and who pays for it?" The biggest saving is from the acceptance that society will not have to pay for all services for everyone, but only for those termed most "basic."

The first tier would be tax supported by the state. The state would use its purchasing power to buy vaccines or other supplies at the best price and distribute them to physicians, health departments, or other groups to administer to the public. The cost of the "work" component of this care would not change significantly, but cost of the "technical" component would decrease with the economies of volume. Similarly, the benefits of the prevention would increase as the service is applied to all the population, rather than only to those now insured.

The second tier of "uniform health care benefits" would be paid for by employers for their employees, by individuals who are self-employed, and by state government for the indigent. Existing federal COBRA regulations would

¹ Accepted for publication March 12, 1991.

From the Washington State Medical Society, Seattle.

Reprinted from *Archives of Dermatology* (1991;127:712-713).

allow the temporarily unemployed to continue their insurance. In our state, this premium would probably be in the range of \$60 to \$90 per month. All citizens would be required by law to have this coverage. These benefits would be identical in all insurance policies.

The third tier could be purchased by individuals, employers, governmental agencies, or unions, and could be negotiated by collective-bargaining agreements. Any group, or individual, could purchase whatever additional limits they desire. The cost would be negotiable and coverage tailored to individual groups. The fourth tier could be purchased similarly.

Applied across all these tiers would be uniform application of practice parameters, mandatory utilization review linked to these parameters, and uniform data collection on claims frequency, costs, and outcomes. Because of mandatory coverage for "uniform health care benefits," preexisting disease exclusions would be eliminated. Insurance companies would only be allowed to use "community rating," instead of "experience rating."

To provide immediate eligibility information and drastically reduce physician and hospital billing costs, each person would have a uniformly coded credit card and a single clearinghouse would be used for billing and claims management. High-cost services requiring preauthorization would be standardized for all plans, with such decisions made by a private Health Care Quality Foundation (already in existence in Washington State). That same quality foundation would be the data bank for all services.

The cost savings realized would come from a combination of the following factors: reduction in administrative costs, payment for only appropriate utilization frequency (as determined by peer professionals in combination with payers), coinsurance by the users themselves, and ultimately supply-demand economics. Fee controls should not be imposed, because moving away from the free market would again produce the current cost shift that got us into this mess. In a truly free market, the ultimate worth of goods and services is defined by what the buyer is willing to pay. If that value is too low, suppliers (physicians) will leave the market, increasing the demand and the fee paid. In the long run, patients will decide what our services are worth.

What are the alternatives to this system? Canada's solution is a global budget applied to all health care, with an inflation-adjusted increase each year. This means that changing numbers of physicians, changing demographics of the population and the increasing application of new technology with a capped budget produce rationing of

care, with physicians the rationers. Another option, which removes incentives for excellence, is all physicians being salaried as employees of the state or a megacorporation, with additional utilization review. A third option is extensive physician rate regulation, coupled with utilization review, our current situation, and exemplified by Medicare.

Public opinion research in our state indicates agreement with the concept of a multitiered health system, but it also indicates a desire to tightly control physician and hospital fees as a simplistic solution to skyrocketing costs, unless some other solution is found. The desire to provide basic services to all, regardless of income, is strongly felt, but "Don't tax me more than \$300 per year to pay for it" is the unrealistic public answer for the cost.

And how does all this apply to dermatology? I think that we must decide what constitute "basic dermatological services," recognize that not all we do should be insured in the same way, and that some services should not be insured at all. The management of pigmented lesions is our forte, both diagnostically and therapeutically, but, certainly, the treatment of melanoma is more "basic" than that of seborrheic keratosis, once the diagnosis is established. Other examples abound.

This change in what is insured is already occurring. Payment for treatment of "nonirritated" seborrheic keratoses is not covered under many plans, including Medicare. As more charges become the patient's responsibility, less services (and, possibly, fewer physicians) may be required.

The penalty for not prioritizing what is always insured, optionally insured, or self-paid is the continued inclusion of all services under a single premium. If that global premium is not high enough, the fee for each service must decrease, the utilization frequency must fall, or some services will not be covered. Medicare and Medicaid are classic examples where the total premium is inadequate. Those who pay for private health insurance say the premium is already too high.

The American Academy of Dermatology has a task force beginning to look at "basic dermatological services." Creative and innovative solutions must come from dermatology and all of medicine if we are to retain our professional autonomy and maintain our position of trust as the advocates for our patients. A profession cannot ethically do less.

Reference

1. US Preventive Services Task Force. *Guide to Clinical Preventive Services*. Baltimore, Md: Williams & Wilkins; 1989.

The Underinsured and the Uninsured

Maria D. Allo, MD

The so-called crisis in health care speaks to a situation whose solution is overwhelming the most ambitious among us. As in other "larger than life" crises, it is easy to separate ourselves from the problem, leaving its solution to apparently mightier powers. Often we stand back from the issues; rarely do we identify ourselves as part of the problem. We are numbed into complacency because our life and practice are not directly touched; or, if they are, it is in a way by which we can shamelessly dismiss the problem as society's, or the public hospital's, or somebody else's (whoever that is!). In some practices, the wallet biopsy is the first procedure performed, and "greenopenia" is the diagnosis justifying transfer to the public facility, or the "teaching service."

Most of us became physicians because we wanted to care for other people. Changes in the practice of medicine have subverted the system so that one can easily lose sight of this. Medical linguistics reflect this change. We are no longer physicians caring for patients; we are "providers servicing clients." Nonetheless, our "clients" still need our care, our skill, and our compassion. Looking past the insurers' code number, the medical assistance card number, or the look of despair when asked for the card that is not possessed, we see in the "client" a patient with the needs that we were trained to care for. We *are* our brothers' and

sisters' keepers. Our ultimate satisfaction as physicians is as caretaker and healer.

If fiscal realities preclude pro bono care of the medically indigent as part of daily practice, we can be supportive of those physicians who have chosen to provide this care. We can be sensitive to the increasing number of patients and decreasing funding allocated for care of these patients, many of whom are the working poor who defer seeking care until their treatable disease approaches end stage. We can respect the human dignity of all who call our offices and provide alternative care sources when we cannot accommodate an individual seeking our help.

The present medical care system reflects attitudes and values of our individualistic, affluent society, which speaks poorly for us as a community. Certainly "the medical establishment" does not bear responsibility for all of society's ills. In fact, like the education system, it has been assigned responsibility for larger societal problems not traditionally the domain of medicine. Nevertheless, our response ought to be as role models rather than as part of the problem. We need to be advocates for all of our patients and strive to make a system that provides a just and competent level of care to all those who need it. This entails defining essential care, lobbying for means to provide it, and, if necessary, restricting expensive or unnecessary services until the basic needs of the population at large have been served. There is indeed unrest resulting from the ills of our medical system, but there can be no peace until there is justice. We must be responsible to see that justice is done.

Accepted for publication March 3, 1991.

From the Department of Surgery, Santa Clara Valley Medical Center, San Jose, Calif.

Reprinted from *Archives of Surgery* (1991;126:551).

Surgical Care for the Uninsured and Underinsured

Claude H. Organ, Jr, MD

The American Medical Association and its family of journals, including *JAMA*, are focusing this month on health care for the uninsured and underinsured in the American society. This complex socioeconomic problem has troubled our nation for many years. The number of underinsured and uninsured Americans continues to increase at an alarming rate. It has become a serious national concern and fosters continuing dialogue. Our national effort for resolution of this problem continues to be tepid. While we are experiencing a soaring deficit and a deepening recession, the costly war in the Persian Gulf has expanded the roles of the unemployed and underinsured.

Surgeons trained in the United States during the last 50 years are intensely aware of existing practices in many of our hospitals that complicate health care for the poor. Significant parts of our surgical training have occurred in public hospitals where there are often long waiting lines, equipment shortages, poor staffing, and underfunding, coupled with high patient cancellation and no-show rates. These are factors that affect, but are not directly related to, our discipline. The United States has a gifted surgical community. We are in many ways confronted with a dilemma of our own research and patient care successes. Although the financing of health care is a global concern, the surgical disciplines are not immune from the effects of this problem. We are not a *sui generis* group. While responsibility for our concern may best be left to our informed national surgical leadership, we can no longer ignore this continuing national problem with the aphorism, "We have always taken care of the poor."

In our system of health care, costs attributable to surgery are driven by increased pressure for aggressive surgical intervention, society's reluctance to accept death as a natural event, a system of resident training that encourages "high-tech" and critical care surgery, and the threat of litigation, which increases the use of diagnostic tests and influences management decisions. Even so, within our complex society, surgeons should accept the challenge and rise to new standards of accountability regarding care of the poor.

Our national priorities are poorly focused and need serious realignment. These data serve to emphasize our concerns: (1) In the last 44 years, we have had only seven balanced national budgets, the latest being in 1969; (2) More than \$100 billion will be spent in 1991 to protect Japan and Western Europe from military threats; (3) Only 4.1% of our gross national product in 1989 was spent on

public education, compared with 4.8% in Japan and 7% in Sweden; and (4) The percentage of our gross national product spent on the health care system in 1989 was 11.1%, compared with 6.8% in Australia.

These increased health care costs are multifactorial in origin and generally attributed to increased utilization of medical services; phenomenal technologic developments; inflation; increased hospital personnel costs; an aging population, including the chronically ill; and the growth of insurance coverage and other third-party payments. The lingo in the health care industry has become saturated with terms such as "macroallocation" and "microallocation." Society, while confronting the reality of our limited health care resources, simultaneously raises the complex questions of allocation, rationing, and financing.¹

Several special projects recently funded by the National Science Foundation and the National Institute of Mental Health are a reflection of our national priorities: (1) a study of the cause of rudeness, cheating, and lying on tennis courts that received \$2500; (2) a study of why people fall in love that received \$84 000; (3) a study of how long it takes to cook eggs that received \$46 000; (4) a "study of sexual-looking, classical conditioning of sexual arousal, and improvement of copulatory performance of Japanese quail" that received \$107 000; and (5) construction of a 10-story replica of the great pyramid of Cheops that received \$500 000.² The military-industrial complex has been no less a participant in utilizing a significant segment of our gross national product.

Back in the trenches, we should develop an agenda within the discipline of surgery that governs our attitudes and practices in caring for the surgical needs of the poor. This agenda need not await a consensus on global funding mechanisms. How then do we take care of the surgical needs of the underinsured and uninsured during this protracted national dialogue? Observations herein are not intended to ignore the contributions of those who fulfill their responsibilities to indigent patients in their practices. The pro bono work of surgeons would be a difficult figure to document.

Reflect back for a moment, however: Would your surgical training have been possible in the absence of indigent patients? Did they contribute to your learning experience? Do you feel any professional and/or personal obligation (payback) to those who contributed to your early surgical training? Fairness does not dictate that a surgeon accept and treat only the uninsured or underinsured. This reaction begs the question. A better question is: Have you done your fair share? There are dignified ways to exercise such a commitment to this segment of our health care population.

I recently made a personal appointment to see a pro-

Accepted for publication April 4, 1991.

From the Department of Surgery, University of California—Davis, Oakland.

Reprinted from *Archives of Surgery* (1991;126:549-550).

fessional colleague. After identifying myself, the first bit of information requested by the receptionist was the name of my insurance carrier. This is not an unusual occurrence. Such contretemps serve to confirm that our practices are economically driven.³ Have we developed a two-tier system of surgical care in which the poor receive inferior and less attentive care than patients who can afford to pay? Too often the poor are considered lower class and disruptive to our practices and hospital system. Can we neglect or defer care for this group of less fortunate patients while a global funding strategy is being developed? By our voluntary actions we can assist the underinsured and uninsured segment of society in maintaining their sense of dignity. Such posturing is not designed to be sententious. Economic considerations seem to play an inordinate role in driving our moral obligations on this issue.

Humane attitudes do not require legislation, are cost-effective, and have been the cornerstone of our love affair with patients for centuries. Our regard of the indigent patient during professional contact is reflected in the manner by which we obtain informed consents, interpret the need for an operation or its results, supervise residents, and return phone calls. Our body language and attitudes speak louder than words. The 1977 observation by Egbert and Rothman⁴ that blacks were 2.2 to 4.3 times more likely than whites to be under the care of surgeons in training ($P < .001$), although widely criticized at the time, continues to haunt our system or nonsystem. We should reassure ourselves and society that indications for operative intervention are not governed by the economic status of patients. What are our reasons for not admitting Medicare and Medicaid patients to our practices? We must offer our surgical services to individuals in Appalachia, rural America, and the inner city, and, yes, even to the incarcerated within our criminal justice system. No patient should be denied needed emergency or elective surgery because of monetary considerations alone.

Surgeons could do more to control their own destinies by taking care of the uninsured and underinsured. These actions must go beyond mere public relations rhetoric. Many of our colleagues will counter that we do better than others, which again begs the question by comparing us with noncomparable occupations. It is a rare occasion at surgical meetings where ethical issues are discussed, that the agenda includes surgical care of the poor.

Surgeons serve as role models to surgical house officers whose lives we influence. To what extent is our management of the poor patient exemplary for our residents? The profit motive must be placed within the context of other

value-oriented and moral obligations and not be a *carpe diem*. Such a reproachment must be taught beginning at the undergraduate level of medical education.

Surgeons are no more guilty of "skimming" pay patients and avoiding indigent patient care than any other group within our profession. Practitioners who skim feel this procedure is justified because those who can pay are subject to an informal tax which permits the cost of providing care for those who cannot pay (the Aunt Emma test). The transfer of the underinsured or uninsured patients from private to public hospitals because there is no method of reimbursement is institutional skimming (abandonment?). Surgeons are often blamed, instead of the hospital, for these transfer decisions. Surgical problems, when they exist in those unable to pay for needed services, are not the sole province of university, county, or VA hospitals, but rather, as Spinoza said, "Care of the poor is incumbent upon society as a whole."⁵ Laws have been passed to discourage "dumping." These federal guidelines serve to "encourage" hospitals to assume responsibility for their share of care for the poor, particularly in emergency situations. Health maintenance organizations and private clinics are no less guilty of these same practices. However, these guidelines are not uniformly enforced. Some hospitals have a fixed percentile ceiling on the level of charity care they underwrite and prorate this pernicious policy throughout the year on a monthly basis. These personal and institutional practices suggest that we have a crisis in our value system.

We have sat on the sidelines too long watching this revolution and hoping that someone else will take care of the problem. Today we must exhibit greater concern for humane than for monetary values. The significance of the Rip van Winkle story was not that he slept for so many years but that he slept through a revolution. To hope that the problem of health care for the underinsured and uninsured will go away or does not exist is to depart from reality.

References

1. *The Price of Life: Ethics and Economics*. Minneapolis, Minn: Minnesota Coalition on Health Care Costs; 1984.
2. Federal Budget, 1990. *Federal Register*. 1990;60.
3. Shames L. *The Hunger for More—Searching for Values in the Age of Greed*. New York, NY: Times Books; 1989.
4. Egbert LD, Rothman IL. Relation between the race and economic status of patients and who performs their surgery. *N Engl J Med*. 1977;297:90-91.
5. Spinoza B. *Ethics*. Part 1. Proposition LXX.

Caring for the Uninsured

The Oregon Experience

Richard Allen, MD

● A commission was appointed by the governor of Oregon to develop strategies to increase health care access for the estimated 400 000 Oregonians who were without health insurance. Because of real or perceived financial barriers to access, these uninsured usually had more expensive, acute, and episodic care that resulted in the shifting of cost to the insured and in higher health care costs. After studying the problem for 6 months, the commission made specific recommendations that, if fully implemented, would ensure access to health care for virtually all uninsured Oregonians. The recommendations support existing medical and insurance systems, foster public and private partnerships, and provide for the leveraging of federal Medicaid dollars in a favorable ratio to the state. The implementation of these recommendations should ultimately reduce costs and at the same time provide more care.

Providing health care for the uninsured is a difficult problem that the state of Oregon has been making attempts to solve. The author's involvement in this continuing perplexing process dates back several years. The governor of the state was persuaded in 1988, his second year in office, to appoint a special task force to deal with this problem. The task force, named the "Governor's Commission on Uncompensated Care," was convened in February 1988, with a reporting deadline of 6 months, so that legislation could be drafted in the fall of 1988, for submission to the 1989 state legislature (which meets biennially). The author, who at the time was president of the Oregon Medical Association, was the only physician appointed to the 18-member Commission. The other commissioners included business and insurance executives, teachers, sociologists, hospital executives, and public health nurses and legislators.

THE PROBLEM

Oregon has 400 000 citizens under the age of 65 years who do not have health insurance coverage. Sixty-five percent were employed workers and their families. Since the Oregon legislature has allocated funding for Medicaid to only 58% of the federal poverty level (FPL), the remaining one third of the uninsured were those either unemployed or earning more than 58% of the FPL. A small number, approximately 15 000, were high-risk individuals who were largely considered uninsurable.

To provide care for this growing number of uninsured, providers found themselves shifting the cost of care to the insured. However, those who were providing health care to their employees became increasingly unwilling to bear these costs, thereby creating an ever-widening gap. The Commission found three main reasons for the limitations in access to health care: first, there were the obvious financial barriers to those unable to afford care; second, there were the limitations to Medicaid imposed by the state legislature; and third, there were problems of availability of services, mainly in rural areas.

THE SOLUTION

The Commission's first recommendation was that the state of Oregon adopt a mission statement saying that it had "an obligation to ensure equitable access without excessive burdens to an adequate level of health care for all Oregonians." This obligation should be balanced by people's obligation to provide for their own needs.¹ Toward that end, any recommended strategies needed to include the maintenance of public and private partnership, the leveraging of private and federal dollars, the traditional employment-based insurance system, and that the most cost-effective methods and equitable approaches be utilized. The following recommendations were made.

Employer Tax Credit

Legislation was recommended (and passed) that would give a tax credit of \$25 per employee per month to small businesses with fewer than 25 employees (the bulk of the employed uninsured). The program would be voluntary, but if compliance were poor, it would become mandatory in 5 years' time. The Commission encouraged the use of managed care systems to regulate utilization and provide cost containment. This program is now in force, and compliance has been slow but steady.

The plight of the tens of millions of US citizens who have no, or inadequate, health insurance is of increasing concern to the public and physicians alike. In an effort to stimulate discussion about this vital issue, JAMA is devoting the May 15, 1991, issue to "Caring for the Uninsured and Underinsured." The nine AMA specialty journals are also publishing articles dealing with this same topic in their May 1991 issues. This special article on the approach being taken by the state of Oregon provides one potential solution to this problem. Our readers are encouraged to seek out the May 15th issue of JAMA and the May issues of the other AMA specialty journals for additional articles on this important topic. —THE EDITOR.

Accepted for publication March 15, 1991.

From the Department of Obstetrics and Gynecology, Oregon Health Sciences University, Portland.

Reprinted from *Archives of Pathology and Laboratory Medicine* (1991;115:437-439).

High-Risk Pool

Legislation was proposed (and subsequently passed) to create a state-run high-risk pool for the "uninsurable." It is funded by a surcharge on insurance companies doing business in the state, with any necessary additional funding provided by the state's reserve fund.

Medicaid Expansion

It was strongly believed that the state should fund Medicaid to at least 100% of the FPL and up to 185% of the FPL for pregnant women and children. Federal matching funds are available to those who return to employment but are still below the FPL. A demonstration project was proposed that could then use federal dollars to leverage funding. It was also believed that it would be desirable to use these funds to purchase health insurance instead of having the State Welfare Department reimburse providers. This would remove the "welfare stigma" and improve access. Access would also be improved by reducing the paperwork and the "hassle factor" as much as possible (at least at the level of managed care competition).

Because federal matching funds of up to 185% of the FPL are available to pregnant women and children, special emphasis was placed on access to prenatal care. Since the cost of low-birth-weight babies is excessive (up to \$250 000 per infant), it was thought that each dollar spent on prenatal care, which would help to prevent a low-birth-weight infant, would produce a saving of \$2 to \$11. Figures have ranged from a saving in neonatal intensive care costs of \$1.70 to \$2.60 for every \$1 spent on prenatal care² to a multiplier of 3.33.³ In other words, the dollars spent on preventive care would result in long-range cost savings and ultimately a reduction in expenditures, not to mention potential improvements in the quality of life of these infants.

Continuation of Benefits for the Unemployed

Oregon law, similar to the federal COBRA (Consolidated Omnibus Budget Reconciliation Act) legislation, provides for continuation of benefits to those individuals who have recently become unemployed and as a result have lost their health insurance benefits. Unfortunately, most of those who are eligible to continue their insurance benefits have elected not to do so because of the cost. Thus, it was proposed that a surcharge be placed on unemployment insurance in order to provide continued coverage. The amount of the surcharge needed to accomplish this was figured to be \$0.00263 and would amount to an 8.5% total increase in the average unemployment tax.

Emphasis on Primary Care

The state, through county health departments and some nonprofit clinics, currently provides a great deal of primary care and preventive medicine to the uninsured. These clinics operate with minimal funds and yet provide a maximum amount of service. It was proposed that \$2 million be provided by the general fund (a minimal figure) to the State Health Division and local-county public health departments for this purpose. By improving access to the generally high-risk populations that use these clinics, and thereby providing early and preventive treatment, it was hoped that long-range improvement in health care, with accompanying decreases in expenditures, would ensue.

Cost-Containment Strategies

Because of the concerns over the rising cost of health care, the Commission stressed the importance of continued monitoring to keep the cost per unit of care level and neutralize the shifting of costs. It was thought that managed care systems, which, in turn, would be monitored by the Office of Health Policy, could best ensure proper utilization and cost control.⁴ In addition, tort reform legislation was proposed to reduce the costs of "defensive medicine."

RESULTS

The total expenditure in state general funds to accomplish all of the preceding solutions was estimated at \$28.2 million, which, in turn, would generate \$67.5 million in matching federal funds. There would be some loss of revenue due to the small business tax credits estimated to be in the range of \$26 million per biennium if there was 100% enrollment. This would hopefully be offset by a healthier population as a result of the increased access with earlier preventive care and, ultimately, a cost saving. To date, the small business insurance plan has enrolled 1730 employer groups, with employees and dependents totaling 7012. There are seven commercial carriers that are participating in the program; they are offering a basic package that ranges from a minimum premium of \$53.33 per month to a more standard package that pegs its rates to a large successful health maintenance organization.

To expand the Medicaid eligibles, a waiver application needed to be obtained from the Health Care Financing Administration to set up the demonstration project for federal funds. Since there needed to be some constraints in terms of what the legislature would budget, a special commission (the Health Services Commission) would be created to prioritize services to provide the most efficacious care for the dollars spent. Also, to see whether or not such a "list of services" could be developed and prioritized, a research grant was obtained from a local charitable trust, and the Oregon Medicaid Priority Setting Project was established. The participants were divided into several focus groups to broadly prioritize care so that actuarial costs could be estimated.⁵ When this was completed, state legislators were provided with the information to assist in drafting legislation. It is important to emphasize that the funding for care would then be the responsibility of the legislature (and thereby of the public, through their elected representatives).

Legislation was proposed and enacted in 1989 with the passage of three different bills: (1) Medicaid Reform (SB 27), (2) Uninsurable High-Risk Pool (SB 534), and (3) Small Business Insurance Pool (SB 935). It is the author's opinion that the latter bill is the most important of the three, but it is the first bill (SB 27) that has gained all of the media attention.⁶ The section of SB 27 that calls for a demonstration project requires a waiver in the Medicare/Medicaid rules, and failure to obtain this waiver in order to proceed with the demonstration project has kept the entire proposal from becoming operational.

Currently, the state has not formally applied for the necessary waiver and is awaiting the results of the Health Services Commission work. The Commission is close to completing its work and made a first draft public in March 1991 so that the legislative session currently convening

could make its budget deliberations. If this can be accomplished in late spring of this year, the waiver application will be submitted. If the waiver is obtained, the program could be in place by July 1992.

CONCLUSIONS

To provide health care for the estimated 400 000 of its citizens without health insurance, the State of Oregon appointed a commission to study the problem and make recommendations. The Commission arrived at six recommendations that, if enacted, would solve the problem of equitable access without excessive financial burden. They were (1) an employee tax credit for small businesses; (2) a state-run high-risk pool; (3) an expansion of Medicaid to 100% of the FPL; (4) a plan for continuation of benefits to the recently unemployed; (5) increased funding for primary clinics, especially in the more rural areas of the state; and (6) various cost-containment strategies, particularly managed care programs and tort reform.

Currently, a newly created state agency, the Health Services Commission, is completing its work to prioritize services and the administrative structure to deliver these services. All of the above recommendations could be carried out within existing medical and insurance systems and

were within state budget resources. The only "outside" help needed would be a waiver from the Health Care Financing Administration for the Medicaid demonstration project. However, even without this, it was thought that a basic health care package could be defined and that the other recommendations could be acted on. Ensuring access for better health care should ultimately reduce costs and result in a healthier population.

References

1. Governor's Commission on Health Care. *Report to Governor Neil Goldschmidt on Improving Access to Health Care for all Oregonians*. Salem, Ore: Office of Health Policy, State of Oregon; September 1, 1988.
2. Kornbrot C. Risk reduction in pregnancies of low income women. *Mobius*. 1984;4:34-43.
3. National Academy of Science Institute of Medicine. *Preventing Low Birth Weight*. Washington, DC: National Academy Press; 1985.
4. Brook RH, Kosecoff JB. Competition and quality. *Health Aff (Milwood)*. 1988;7:153.
5. Golenski JD, Blum SR. *Oregon Medicaid Priority-Setting Project*. Portland, Ore: Medical Research Foundation of Oregon; December 1988-March 1989.
6. Allen R. Why the Oregon plan deserves your support. *Med Econ*. 1990;16:18-26.

Prioritization of Health Care Services

A Progress Report by the Oregon Health Services Commission

Harvey D. Klevit, MD; Alan C. Bates, DO; Tina Castanares, MD; E. Paul Kirk, MB;
Paige R. Sipes-Metzler, DPA; Richard Wopat, MD

● The Oregon Health Services Commission is composed of a group of 11 consumers and health care professionals. It was appointed by the governor as required by the "Oregon Basic Health Services Act" to produce a prioritized list of health services ranked on the basis of their relative importance to populations served. Following actuarial analysis, the legislature will determine the extent to which the "list" of services can be funded to provide health care access for Medicaid recipients earning up to the 100th percentile of the federal poverty level. Prioritization will be based on a cost-benefit formula applied to each treatment/condition unit and assignment of each of these to a general category, which itself has been ranked on the basis of "public value."

In 1988 it became necessary for Oregon, like other states, to address a budgetary shortfall in the funding of health services for Medicaid recipients. The Oregon Legislature determined that it would no longer pay for most organ transplants, but instead would use the money recovered for maternity care for approximately 1500 women. As a result, a 7-year-old boy named Coby Howard was denied funding for a bone marrow transplant for leukemia; he died \$30 000 short of the \$100 000 needed to obtain the procedure, and became a cause célèbre in spite of the fact that he was not in remission and thus not a good candidate for the procedure.¹ It was pointed out by Golenski¹ that arbitrary removal of one type of treatment without considering the entire spectrum of care was inherently unjust.

Oregon was and still is rationing health care covertly through decreasing the number of individuals eligible for Medicaid services. Currently, only those residents with family incomes up to the 67th percentile of federal poverty level are eligible for the Medically Needy Program. A pilot study, "The Oregon Medicaid Priority Setting Project," showed that a group of health professionals could rank the importance of general categories of care. This played an important role in convincing the legislature that priorities could be set and helped pave the way for innovation.

In the 1989 legislative session Oregon adopted sweeping initiatives to reduce considerably the number of individuals without access to health care. These bills, comprising "The Oregon Basic Health Services Act," were designed to complement one another by providing access to basic health care for the approximately 400 000 uninsured of the state. Senate

Bill (SB) 935 required all employers to provide health insurance for the 260 000 uninsured working Oregonians above the federal poverty level either directly or indirectly through a state-run pool. SB 534 established a mechanism for providing coverage for the 20 000 individuals with preexisting conditions that are often excluded by commercial health insurance. The third, SB 27, was the most controversial. It has been widely publicized as "Oregon's plan for rationing health care" and was designed to increase the eligibility for Medicaid coverage to 100% of the federal poverty level from the current 67% (an additional 116 000 recipients) by limiting the number of health services the state would cover. The benefits covered for Medicaid recipients would also serve as a minimum package employers would be required to provide under SB 935.

This legislation has remained controversial. Work is still in progress to establish a required list of prioritized services, and it appears that the decision at the federal level, whether to grant Oregon waivers for Medicaid mandates, will be postponed at least until the final report and prioritized list of services is completed and approved by the legislature. This promises to be a social policy issue that will be hotly debated in the political arena.

An 11-member body, the Oregon Health Services Commission (HSC), was appointed by the governor in August 1989, and given the simple, straight forward instruction "to report. . . a list of health services ranked by priority from the most important to the least important, representing the comparative benefits of each service to the entire population to be served." The bill includes additional provisions that are fundamental to the process, among which are the following: (1) active solicitation of public involvement in a meeting process to build a consensus on the values to be used to guide health resource allocation decisions; (2) implementation through contracting with managed-care systems; (3) the legislature, at a time of budgetary shortfall, would not have the authority to limit the number of recipients by modifying eligibility requirements but would be obliged to decrease the number of available services or make more funds available to cover the existing services; (4) the reimbursement or capitation rates for providers and plans established under the contractual agreement could not be reduced at a time of insufficient resources; and (5) Medicaid services mandated for the elderly, blind, or disabled persons, or children in foster care would continue without prioritization.

The HSC is composed of five physicians (three family physicians, an obstetrician, and a pediatrician), a public health nurse, a social worker, and four laypersons, one of whom

Accepted for publication March 22, 1991.

From the Oregon Health Services Commission, Salem.

Reprinted from *Archives of Internal Medicine* (1991;151:912-916).

was the chairman. The appointment of primary care providers to the HSC tended to minimize pressure from special interests thus enhancing general acceptance of the final ranking of services. In its brief existence, it has encountered a mixture of advice, support, and the following criticisms: (1) the principles on which Oregon is basing its prioritization are unethical; (2) it is impossible to rank services in a rational, logical way on the basis of a cost-benefit formula derived from population health outcomes; (3) the bill itself does not directly address cost containment problems of the existing system; (4) this social/medical experiment should not be conducted on the Medicaid population alone, but prioritization of services should be applied to everyone regardless of age, disability, state of health, personal resources, and the source of their health insurance; (5) the prioritization process does not include mandated services for the elderly, disabled, blind, and mentally defective, which account for 70% of the Oregon Medicaid budget; and (6) this is yet another "Band-Aid" approach; the nation should move with haste to a universal access national health insurance program modeled after the Canadian or British systems, or design a new plan.

These opinions have been presented in a variety of forums from poignant personal testimony in public hearings to broad political polemic. Through the process, HSC has been buoyed by the universal acceptance that society's expectations are on an inevitable collision course with its resources, and that something must be done. The need to prioritize is widely accepted and legislation similar to Oregon's is being considered in 10 or more other states. It is more honest to recognize the enormity of the individual tragedies that accompany the absence of health insurance than to pretend that no such problem exists, so that action taken on the basis of that honest acknowledgment is—a priori—ethical.

In summary, HSC has been charged to develop a list of prioritized services used for all illness, injury, intoxication, and ascertain the effectiveness of each service applied to the target population. The legislators will then determine at what point on the list a line will be drawn below which services cannot be funded unless additional resources are allocated.

This article serves as a progress report, describing some of the problems HSC has encountered and the process it has adopted to establish its list of services.

METHODS

Oregon SB 27 does not specify a method or approach for HSC to develop its ranked list of services. Scientific proof of relative benefit of a treatment or intervention to the population served was neither specified nor implied in the language of the bill. A Health Outcomes Sub-Committee was formed early in the process of HSC for the purpose of developing an approach to the evaluation of the relative importance of each service to be considered. A subcommittee was also formed to explore methods to rank mental health services that have been exempted from prioritization for the initial implementation of the plan. It was recognized that a list of ranked services is meaningless without applying each of them to specific conditions. Moreover, HSC believed that public and professional acceptance would be maximized if an objective measurement tool was used in determining relative benefit of each of the services considered on the basis of outcome, duration of benefit, and cost.

Methods that assess the state of health of an individual

were explored as possible tools to measure the relative benefits of the health services under consideration. The Quality of Well-Being (QWB) Scale of Kaplan and Anderson² was selected as the most appropriate and thorough measure for our purposes. Simply stated, it measures how an individual functions independently and how he/she feels normally and during illness. Its advantage over other tools is that it will provide an interface between scientific fact provided by informed practitioners in terms of symptoms and disabilities and the public's perception of the relative importance of them.

Kaplan's QWB system is a measure of an individual's or population's overall state of health at a point in time. The method assigns a score of 1.0 to a perfectly healthy individual and a score of 0 for death (see Tables 1 and 2 for limitation and symptom codes with weights supplied by the public). The severity of certain limitations in physical activity, mobility, social activity, and/or the presence of physical or mental symptoms derived from a list of 24 categories allows the calculation of the QWB score. Each disability and symptom was weighed on the basis of information supplied by Oregon residents during a telephone survey. The QWB formula is as follows:

$$QWB = 1 - [\text{Mobility Weight}] - [\text{Physical Activity Weight}] - [\text{Social Activity Weight}] - [\text{Symptom Weight}]$$

The net benefit of a service or intervention for a particular condition or group of conditions was defined as the difference between the expected QWB score resulting from the condition and that following either definitive or palliative treatment (net QWB). This measure was applied to a large number of treatments used for the majority of conditions coded according to the *International Classification of Diseases*, 9th ed. Calculation was further refined by applying the duration of time with QWB status persisted. A cost-benefit formula was defined as follows:

$$\frac{\text{Cost, \$}}{\text{Net Benefit} \times \text{Duration, Years}} = \frac{\text{Cost, \$}}{[QWB_2 - QWB_1] \times \text{Duration, Years}}$$

$$QWB_1 = \text{QWB Resulting from Untreated Condition}$$

$$QWB_2 = \text{QWB Following Treatment}$$

Cost represents charges submitted in the past to the Oregon Adult and Family Services Division as supplied by the Oregon Office of Medical Assistance Programs as well as other payers and providers. The cost includes all services pertaining to a particular diagnosis, including laboratory and imaging services, hospitalization, drugs, professional fees, and ancillary services such as physical and occupational therapy, rehabilitation, and social services.

Since virtually all medical conditions are associated with multiple symptoms and/or limitations, the probability of occurrence for each symptom/limitation as well as death was also applied to the equation. Thus, the QWB score for an individual with a given condition with or without treatment is 1.0 (perfect health) less the sum of the weights of each symptom/limitation multiplied by their probabilities of occurring. The sum of the probabilities of all symptom/limitations must total 100%.

Table 1.—Oregon vs Orange County, California, Quality of Well-Being (QWB) Weights for Physical and Social Limitations

Definition	Oregon QWB Weight	Orange County QWB Weight
Mobility Scale		
No limitations for health reasons	0	0
Did not drive a car, health related; did not ride in a car as usual for age (younger than 15 years), health related, and/or did not use public transportation, health related; or had or would have used more help than usual for age to use public transportation, health related	-0.045	-0.062
In hospital or nursing home, health related	-0.044	-0.090
Physical Activity Scale		
No limitations for health reasons	0	0
In wheelchair, moved or controlled movement of wheelchair without help from someone else; or had trouble or did not try to lift, stoop, bend over, or use stairs or inclines, health related; and/or limped, used a cane, crutches, or walker, health related; and/or had any other physical limitation in walking, or did not try to walk as far or as fast as others the same age are able, health related	-0.364	-0.060
In wheelchair, did not move or control the movement of wheelchair without help from someone else, or in bed, chair, or couch for most of the day, health related	-0.536	-0.077
Social Activity Scale		
No limitations for health reasons	0	0
Limited in other (eg, recreational) role activity, health related; and/or limited in major (primary) role activity, health related; and/or performed no major role activity, health related, but did perform self-care activities	-0.062	-0.061
Performed no major role activity, health related, and did not perform or had more help than usual in performance of one or more self-care activities, health related (eg, needed help going to the bathroom or eating)	-0.100	0.106

The expected outcome results are measured at 5-year intervals, which is the customary norm for treatment success. The duration of benefit of an individual condition-treatment pair may have one of four effects. Repetitive or

Table 2.—Oregon vs Orange County, California, Quality of Well-Being (QWB) Weights for Symptom Category

Condition	Oregon QWB Weight	Orange County QWB Weight
Loss of consciousness due to seizures, blackouts, or coma	-0.099	-0.407
Bad burn over large area	-0.359	-0.387
Drainage from sexual organs and discomfort or pain	-0.308	-0.349
Trouble learning, remembering, or thinking clearly	-0.359	-0.340
Difficulty walking because of paralyzed or broken leg	-0.270	-0.333
Pain or weakness in back or joints	-0.248	-0.299
Pain while urinating or having bowel movement	-0.289	-0.292
Stomachaches, vomiting, or diarrhea	-0.358	-0.290
A lot of tiredness or weakness	-0.264	-0.259
Coughed, wheezed, or had trouble breathing	-0.310	-0.257
Often felt depressed or upset	-0.316	-0.257
Headaches or dizziness	-0.298	-0.244
Itchy rash over large area of body	-0.288	-0.240
Trouble talking	-0.181	-0.237
Pain or discomfort in the eyes or had vision problems that corrective lens cannot fix	-0.244	-0.230
Overweight or facial acne	-0.204	-0.188
Pain in ear or trouble hearing	-0.212	-0.170
Prescribed medication or diet for health reasons	-0.119	-0.144
Wear glasses or contact lens	-0.052	-0.011
Trouble falling asleep or staying asleep	-0.243	0
Trouble with sexual performance	-0.255	0
Unable to stop worrying	-0.209	0
Trouble with the use of alcohol or drugs	-0.421	0

episodic treatments are considered to be 1 year in duration. Treatments of self-limited conditions are considered to have 5-year durations. Treatments such as hip replacement that have a duration of greater than 5 years but less than a lifetime are considered for the expected lifetime of the treatment. One-time treatments that will not be repeated (eg, appendectomy) are considered to have lifetime benefits.

All data were entered into a computerized database, which calculated the "cost per benefit year" for each item on the list and then sorted them in rank order from lowest to highest. When the final list becomes available, it will be subjected to actuarial analysis. A capitation rate will be computed for each item on the list representing its total

cost per recipient per budget year. At the point when the running total of the capitated costs equals available resources nothing lower on the list will be included in the benefit package unless further resources can be allocated. The legislature is not authorized to change or rearrange the list in any way. Nothing below the funding line may be provided unless the more "effective" items above it are also included.

Data Collection

The use of a cost-benefit formula required information regarding health outcomes. It became evident at the start of the project that outcomes established scientifically by randomized trials for most of the common treatments and services delivered on a daily basis are largely not available. Morell³ reassured HSC, "In the best of all possible worlds, you would have clinical trials (instead of clinical judgments) to determine the efficacy of each treatment, but that would take you 30 years to do, by which time the treatments would be obsolete."

To await the results of the current outcome research movement would postpone this project for years. It was concluded that ranking of services could be based legitimately on a consensus on outcomes obtained from knowledgeable experienced practitioners. The *International Classification of Diseases*, 9th ed, and *Current Procedural Terminology*, 4th ed, codes were used to create approximately 1600 condition/treatment pairs to be prioritized for the list. The pairings often contained a "clustering" of multiple conditions and interventions that were closely related and for which it was suspected that outcomes would be similar.

Most input was provided by subspecialty, specialty, and generalist groups recruited from their respective state professional societies. In addition, dentists, osteopaths, nurse practitioners, and other alternative providers were asked to contribute data. Each of these groups was given condition/treatment pairings for consideration that were commonly employed in their scope of practice. In instances where data appeared inconsistent or incomplete "second opinions" were sought.

Public Participation

With respect to ensuring public participation, HSC's mandate was made explicit in SB 27. Testimony and information were to be solicited from "advocates for seniors; handicapped persons; mental health services consumers; [and] low-income Oregonians," as well as from providers of health care. Public hearings were to be conducted for this purpose. In addition, a community-meeting process was to be instituted to "actively solicit public involvement . . . [and] to build a consensus on the values to be used to guide health resource allocation decisions."

Efforts were initiated early to meet these objectives. Of three subcommittees established at the outset, two concerned themselves specifically with public and consumer input: a Mental Health and Chemical Dependency Committee, its membership actually including consumers; and a Social Values Committee. The latter undertook to help organize, facilitate, and provide HSC's first oversight of the community meetings and public hearings processes, as well as a random telephone survey of Oregonians. The public's right to attend all HSC and committee meetings is guaranteed by Oregon state law requiring open meetings.

Public Hearings

Twelve public hearings were held throughout the state and others were planned for the future. On the average, 45 formal testimonies were given at each hearing, with some 150 in attendance. The Oregon Health Action Campaign, an advocacy coalition of 72 smaller grassroots organizations, supported the process; one of its constituent groups provided door-to-door canvassing to encourage attendance. Testimony from providers was not infrequent, but the majority of contributors identified themselves as consumers.

Principal concerns expressed at the public hearings generally fell into one of two categories: those concerned with the prioritization process and SB 27 ("philosophical issues"); or those advocating that high priorities be assigned to certain specific categories of service ("special interest issues"). The tenor of the hearings demonstrated that many Oregonians put health care at the top of their personal list of priorities.

The philosophical issues most frequently articulated included health care as a right; the need to guarantee that adequate health care be available to all; the persistence and even institutionalization of a two-tiered system of health care in the United States, with "doors open for the rich, closed for the poor"; and the desirability of ensuring personal choice among providers and delivery systems.

The special interest issues that most regularly emerged concerned organ transplants, family planning, and other reproductive services, and maternity care, including reimbursement for midwifery. Finally, HSC's members were urged to give low rankings to "unnecessary surgeries," but few examples were suggested.

Community Meetings

The planning of the community meetings focused on the aim of consensus building and solicitation of shared public values. Oregon Health Decisions,⁴ a citizens' nonprofit organization, which sponsors such community discussions, conducted 47 meetings in the winter of 1990 on behalf of HSC. Members of HSC were intimately involved in the planning and evaluation of these meetings.

Volunteer facilitators and coordinators were recruited from throughout the state, and were given special training to help them involve their communities. In total, 1048 Oregonians gathered together to express their values about health care, in essence responding to the question, "Why are certain health care services important to us?" Background information on the "Oregon Experiment" was provided, exercises were completed in small groups, and community consensus was articulated in the course of each meeting. Thirteen "values" or desirable characteristics for health care approaches emerged as the most frequently discussed (Table 3). It is acknowledged that the frequency of discussion of a topic has no direct inference as to the importance of a value. However, the information garnered from community meetings and public hearings will serve as an important qualitative determinant in the final "fine-tuning" of the list.

Each type of forum appears to have provided a qualitative sense of the relative public importance of numerous factors necessary to consider in planning health policy. The HSC has expressed its commitment to examine computer-generated drafts of a "prioritized list" in light of

Table 3.—Values Developed by the Community Meeting Process*

Prevention (very high, mentioned at 100% of meetings)
Quality of life (very high, 100%)
Cost-effectiveness (high, >75%)
Ability to function (moderately high, 75%)
Equity (moderately high, 75%)
Effectiveness of treatment (medium high, >50%)
Benefits many (medium, 50%)
Mental health and chemical dependency (medium, 50%)
Personal choice (medium, 50%)
Community compassion (medium low, <50%)
Impact on society (medium low, <50%)
Length of life (medium low, <50%)
Personal responsibility (medium low, <50%)

*Frequency of discussion at meetings is indicated within parentheses.

all public input herein described, and will make adjustments or relocate any service or treatment on such a list if the public would be better served by doing so. In the words of one commissioner, the final list must be "value-driven, not computer-driven."

Telephone Survey

The telephone survey performed in conjunction with the Department of Psychology, Oregon State University, Corvallis, asked 1001 individuals to assign numeric scores to various sets of health symptoms and functional impairments, as they relate to a scale where perfect health equals 100 and death equals 0, derived from Kaplan's QWB Scale (see the "Methods" section). As such, resultant-weighted values, standardized and incorporated into the mathematical prioritization model, reflect Oregon specific public input about the health status of individuals, without reference to the question of one individual's health problems or needs when viewed in the context of societal resource allocation.

The equal completion and refusal rates for the survey demonstrated sensitivity of the questions; demographic information collected simultaneously was reassuring overall with respect to adequate representation of the population of the state.

The telephone survey concluded with an open-ended question, "Is there anything you would like to tell us about your health or about health care in Oregon?" to which 40% responded. Of these, 42% expressed concern about the high costs of both insurance and health care; an additional 11% recommended national health insurance and/or other controls of the health care industry; and 8% cited problems of access including "uninsurability."

In summary, various modalities have been and continue to be employed by HSC that health services prioritization be a public process. The public hearings and community meetings provided numerous opportunities for civic participation in many remote areas of the state. All meetings are open to the public and with rare exception there are questions and comments from the audience. An ongoing effort to provide informative press releases has contributed to a sustained high profile for the project in the state press and elsewhere. A representative group of Oregonians provided input now integral to the formulaic prioritization model. Most important, HSC has committed itself to preparing a prioritized list that fairly reflects the

Table 4.—List of Categories of Health Services to Be Ranked by Health Services Commission

Preventive care for children as defined in US Preventive Services Task Force Report ⁷ (immunizations, well-child care) and treatments of those conditions when the major purpose is to prevent chronic disability (eg, congenital hypothyroidism, treatment of strep throat)
Preventive care for nutritional deficiencies in children at risk (eg, iron)
Preventive dental care for children (eg, hygiene, fluoride)
Preventive care for adults as defined in US Preventive Services Task Force Report ⁷
Preventive care for nutritional deficiencies in adults at risk
Preventive dental care for adults (eg, cleaning, fluoride)
Vision and hearing screening for adults
Health education for adults (eg, smoking cessation, alcohol abuse)
Health and safety education (eg, workplace) for adults
Initial diagnostic screening of presenting problem
Maternity care (eg, prenatal, natal, and postpartum)
Family planning (eg, sterilization, termination, education, and counseling)
Infertility services (eg, workup, treatment, and counseling)
Treatment of acute life-threatening conditions where treatment prevents imminent death with a full recovery and return to previous health state (eg, appendectomy, bacterial meningitis)
Treatment of acute life-threatening conditions where treatment prevents death but without a full return to previous health state (eg, cerebrovascular accident, gunshot to the head)
Treatment of acute nonfatal non-self-limited conditions with return to previous health state (eg, skin diseases)
Treatment of acute nonfatal conditions where treatment will improve quality of well-being without return to prior health state (eg, burns)
Treatment of acute nonfatal self-limited conditions where treatment will expedite return to prior health state (eg, measles, chicken pox, and viral warts)
Treatment of a fatal chronic condition where with treatment one would return to previous health state with improvement in life span and quality of well-being (eg, major depression, transplants, diabetes, schizophrenia)
Treatment of a fatal condition with no improvement in life span but improvement in quality of well-being (eg, stage IV cancer)
Treatment of a fatal condition with improvement in life span, but with no improvement in quality of well-being (eg, life support)
One-time treatment of nonfatal chronic conditions with improvement in quality of well-being (hip replacement)
Repetitive treatment of nonfatal chronic (with recurrent or continuous symptoms) conditions with improvement in quality of well-being with short-term benefit (eg, epilepsy, rheumatoid arthritis)
Treatment of nonfatal conditions with minimal or no improvements in quality of well-being or life span (eg, viral pneumonia)
Comfort care for persons with less than 1 year to live

values articulated at the numerous public hearings and community meetings held in all regions of the state.

RESULTS

The first test of the methodology occurred on May 2, 1990 when a preliminary incomplete prioritized list was made available to the HSC as well as to the public. As expected, numerous flaws, aberrations, and errors were present; those conditions appearing at the top of the list were as follows: (1) bacterial meningitis, (2) phenylketonuria (3) non-Hodgkin's lymphoma, (4) septicemia, (5) meningococemia, (6) disseminated candidiasis, (7) salmonellosis, (8) Wilms' tumor, (9) other bacterial infections, (10) autoimmune hemolytic anemia, (11) congenital adrenal hyperplasia, (12) Ewing's sarcoma, (13) Hodgkin's

disease, (14) insulin-dependent diabetes mellitus, and (15) bacterial endocarditis. Opponents of the plan seized on this as an opportunity to criticize and to ridicule the entire process on the basis of what resulted from the first test of the methodology.^{5,6} Reporting of the most preliminary methodology testing in an open process did little to enhance the public image of the HSC's competence.

Aberrations in the preliminary list of prioritized services made it apparent that there were major deficiencies and inaccuracies in the data used in the cost-benefit formula. Although the continued use of the formula was challenged, a number of commissioners refused to abandon the model, agreed to upgrade the cost and outcome information, and to study the effects of revision of certain of its components. A dual approach was embarked on, one "cleaning the data" and testing the formula and the other exploring alternate methods of prioritization.

All data were revisited and modified when necessary for inappropriate aggregation of codes for similar morbidities, incomplete costs, and questionable outcome information. The duration of a benefit was more clearly defined for treatment of chronic diseases and self-limited disorders.

The group evaluating new approaches worked more with the "soft data," the values of the public, and the opinions of providers heard at open meetings, than with the outcomes and cost information that appeared to be elusive and unreliable. The system of categorization of health care services proposed by D. Hadorn, MD, served as a basis for the fresh approach (*New Jersey Health Decisions Assembly*, May 19, 1989). This provided a way of subdividing the large number of health services into more manageable groupings. Hadorn's original 10 categories were expanded to a total of 26 (Table 4). Nearly half of the categories are related to the care of acute and chronic diseases and the other half were special categories such as preventive health care, maternity care, and comfort care.

Once the 26 categories of care were agreed on it became possible to assign each of the individual treatment/condition pairs into an appropriate category.

The 26 categories were then ranked by HSC on the basis of three attributes: (1) the importance to the individual; (2) the importance to society; and (3) whether the category was basic or essential to a health care plan.

This was accomplished by each commissioner's rating of each category on a 1 to 10 scale for each of the attributes. The sum of the three ratings for each category by each commissioner served as a basis for ranking each generic

category of health care. A modified Delphi technique was used to reach final consensus of the category rankings based on the above public attributes.

This process allowed consideration of the public values and attitudes that were well expressed at public meetings.

Each condition/treatment pair was then assigned to a category of care and ranked on the basis of its cost:benefit ratio as determined by the formula. Thus, the final ranking of a service will be driven more by its category assignment than by its formula-derived value. This was regarded as appropriate at this time, since so few scientifically based health outcome studies are available.

CONCLUSIONS

The HSC has been in existence for slightly over 1 year. It exists for a single purpose—to provide a list of services ranked on the basis of relative importance to the population served. Simple rhetoric, daunting task. A cost-benefit formula approach, referred to as "pseudo-science" by some,⁵ has been tested. It has been fraught with difficulties, especially the unavailability of accurate cost and outcome information. It is hoped that with progress in the outcome movement, more useful data will allow more scientifically accurate ranking and prioritization of services.

With the development of a number of categories of health care that will be ranked in importance on the basis of the large amount of public testimony, the final list should be based on clear messages from consumers of care as well as the cost of producing 1 year's worth of QWB.

References

1. Golenski JD Jr. A report on the Oregon Medicaid priority setting project. Presented at the Cleveland Conference on Bioethics, Cleveland, Ohio, June 2-5, 1990.
2. Kaplan RM, Anderson JP. A general health policy model: update and applications. *Health Serv Res*. 1988;23:203-217.
3. Morell V. Oregon puts bold health plan on ice. *Science*. 1990;249:468-471.
4. Crawshaw R, Garland MJ, Hines B, Lobitz C. Oregon health decisions: an experiment with informed community consent. *JAMA*. 1985;254:3213-3216.
5. Budetti P. Medicaid rationing in Oregon: political wolf in a philosopher's sheepskin. Presented at the Cleveland Conference on Bioethics; June 2-5, 1990; Cleveland, Ohio.
6. The Oregon rationing plan: inspired or misguided? *Healthweek*. 1990;18.
7. US Preventive Services Task Force. *Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions*. Baltimore, Md: Williams & Wilkins; 1989.

Overcoming the Prejudice Against Establishing a National Health Care System

Richard J. Botelho, MD

Our health care system has been very successful in providing the most technologically advanced medical care in the world to affluent and well-insured segments of society. Pride in this accomplishment has contributed to a success-induced blind spot. Our society overlooks and fails to adequately respond to the most significant shortcomings of our health care system, namely, social inequality in access to health care and escalating health care costs.¹⁻⁶

Our country spends the highest percentage of gross national product on health care and, yet, 37 million uninsured Americans have limited access to medical care^{7,8}; 11 million of these Americans are children, 7 million of whom go without regular medical care. In contrast, all other western democracies implicitly or explicitly used the moral ideal, "health care as a human right," to establish different types of national health care systems (NHCS). These systems provide health care to all citizens regardless of their ability to pay and operate under a controlled budget. Regrettably, the prejudice against establishing an NHCS prevents our society from assuring that all Americans have access to affordable health care and from controlling escalating health care costs.

In effect, our society discriminates against providing health care to the uninsured and underinsured poor. Discriminatory health care practices arise from both economic and organizational barriers. The uninsured and underinsured poor must overcome these barriers to obtain medical care.

The economic barrier is the inability of patients to pay for needed medical care. This barrier has many consequences for patients and their families, which include the following: patients' inability to pay for medications, office visits, procedures, and hospitalizations; patient delays in seeking health care; the psychological effects on the family arising from these delays in seeking health care; and burdening families with severe financial problems when they do seek health care.

The organizational barriers that impede our society from assuring universal access to health care arises from structural deficiencies in our health care system; the most notable deficiencies are the poor distribution and insufficient numbers of primary care physicians and the lack of a governing body to control rising health care costs.

Currently, our government is so preoccupied with ris-

ing health care costs that it considers economic and business approaches to address the problem of access to health care and rising health care costs. A paradoxical question arises from this economic preoccupation: "Can the most affluent health care system in the world afford to provide health care to all of its people?" Even though more attention has recently been given to the plight of the uninsured and underinsured poor, our society overlooks the ethical dimensions of these problems.

Our tunnel vision focuses our attention on economic options, such as financing methods and identifying new sources of revenue. Regrettably, this vision lacks an ethical perspective that would help to solve the problems of access to health care and escalating health care costs. From the moral perspective of health care as a human right, the previous question now becomes "how do we pay for our belief in this moral ideal?" For our society to address this question, we must first expand our vision and ethically analyze the largely unconscious, cultural values that hamper our ability to solve these problems.

Ironically, opinion polls show that most Americans favor a right to health care and an NHCS to provide health care for all.⁹⁻¹² In contrast, the Constitution of the United States does not address a right to health care nor provide the government with any guidance on how our society should address the health of the nation.¹³ Not surprisingly, a recent court case denied that health care is a human right.¹⁴

This legal decision is consonant with the Constitution, but it certainly is not consonant with the Universal Declaration of Human Rights (1948),^{15,16} signed by US representatives, that specifies medical care as a right. Since all US citizens do not have access to basic health care, we remain in violation of article 25, section 1, of the Universal Declaration. Thus, on the issue of universal access to health care, public opinion and the Declaration of Human Rights stand in contradiction to current public policy and the Constitution.

Clearly, the reasons why we have inequality in access to health care and escalating health care costs are not simple, and resolving these problems will not be easy. We lack an adequate understanding of why the moral ideal of "health care as a human right" is not a part of our public policy. Most importantly, we pay inadequate attention to the value system that underpins our actual health care policies and practices.

Numerous proposals have been suggested to resolve the plight of the uninsured.¹⁷⁻²⁰ Before advocating any of these proposals, the task of successfully incorporating public opinion into public policy will be easier if one first

Accepted for publication March 20, 1991.

From the Department of Family Medicine, Jacob W. Holler Family Medical Center, Rochester, NY.

Reprinted from *Archives of Internal Medicine* (1991;151:863-869).

Table 1.—A Conflict of Value Systems: Values for and Against a National Health Care System

Against	For
Self-serving individualism	Societal-serving individualism
Libertarianism	Egalitarianism
Antisocialism	Human rights
Antigovernment sentiment	Democracy
Business ethic	Human services
Sovereignty of the biomedical paradigm	Primary care as the foundation of the health care delivery system

Table 2.—The Major Flaws in Our Health Care System

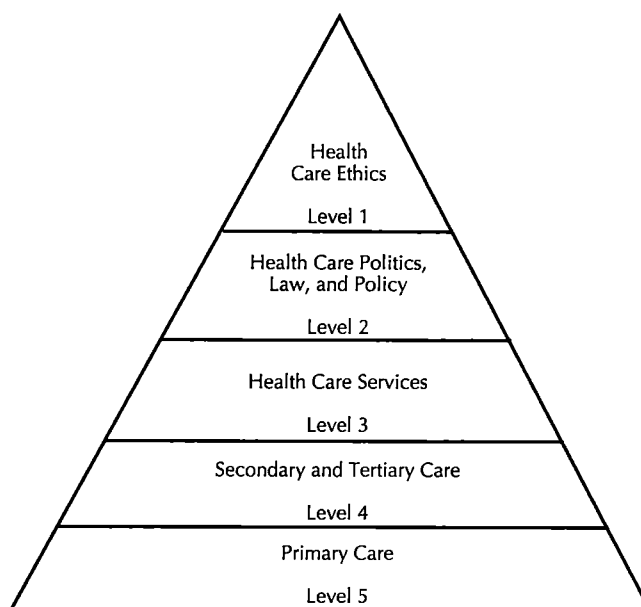
Basic health care is not available for all
No explicit moral directives govern our health care policy
Absence of a national health care policy
No budgetary controls over health care costs
Haphazard cost-shifting practices
A multitier system based on the socioeconomic characteristics of the individual
Fragmented health care services
Uncoordinated health care delivery
Duplication of health care facilities
No rational and equitable distribution of specialists
Covert rationing of health care resources

understands the reasons for the moral hypocrisy arising from the discrepancy between our professed belief in health care as a human right and our discriminatory health care practices. Unless our government and society are educated about the reasons why health care as a human right is not the moral ideal governing our health care policy, no proposals are likely to put our expressed ideals into action.

An analogy can be drawn from the circumstances of an alcoholic patient to address this moral hypocrisy. The alcoholic patient may agree that abstinence is in the best interest of his or her family, but the alcoholic continues to drink in spite of the unhealthy effects on the family. For the alcoholic patient, the "benefits" of continued drinking (relief from the pain of living) outweighs the ill effects of that behavior on the health of the family.

In an analogous fashion, individuals with health insurance coverage have become addicted to their medical "benefits," the overuse and misuse of investigations, death-defying technological interventions, and procedures. Unfortunately, these addictions monopolize and inefficiently use our limited health care resources in a way that is detrimental to the overall health of our nation. In making this analogy, the metaphor of addiction is intended to highlight the discrepancy between what we say in public opinion polls and what we do with our health care policies and practices. This analogy does not explain the reasons for this discrepancy.

Enculturation is a key concept to the understanding of the discrepancy between our professed belief in health care as a human right and our discriminatory health care practices. Enculturation is the process whereby members of society unconsciously internalize cultural values. This process occurs in the absence of interpersonal and social

**Fig 1.—The structure of a national health care system**

conflict; the individual is simply not exposed to or encouraged to consider alternative values. In addressing health care issues, this concept can clarify how our internalized cultural values implicitly conflict with alternative values, which would assure universal access to health care (Table 1).

This conflict of value systems is rarely made explicit in public discussions or articulated in policy statements. The uninsured and underinsured poor are the victims of an unresolved conflict of value systems with regard to our health care policy. Unless this conflict of value systems is explicitly addressed, solutions focusing on uninsured and underinsured poor will not address the flaws of our health care system (Table 2).

Understanding the powerful influence of our value system (Table 1) helps to explain why public opinion polls inadequately reflect society's intent to establish an NHCS, why health care as a human right is not incorporated into our health care policy, and why all US citizens do not have access to affordable health care. In contrast, all other western democratic countries have established different types of national health care systems that assure universal access to health care. Describing the common values and features of these systems can help our society understand why we have not put this moral ideal into practice.

NATIONAL HEALTH CARE SYSTEMS

Health care is a human right. This moral ideal is the guiding principle of the health care ethic in national health care systems (Fig 1). This ideal carries an obligation for governments to assure universal access to health care. With the notable exception of our country, all other western democratic countries use this health care ethic to guide their health care politics, laws, and policies and to establish primary care as the foundation of the health care system.

An NHCS is predominantly a nonprofit human service operating under a controlled budget. Individuals contribute to the national health care budget through general tax

Table 3.—Common Characteristics of Western, Democratic Health Care Systems

All citizens have ready access to a family doctor
Patients have no or nominal health care bills
Tax revenues and/or national insurance pay for basic medical care
Access to high-cost technology and hospital care is regulated
A fixed budget controls government expenditure for health care

Table 4.—Contrasting Characteristics of US Health Care System

Primary care has an inadequate number and poor distribution of physicians
Patients are more economically vulnerable to high medical bills
Employers and individuals pay more for the cost of medical care
Access to high-cost technology and hospital care is poorly controlled
The open system of financing health care contributes to its escalating costs

revenues and/or national insurance. Then, patients have no or nominal health care bills at the time that health care is provided.

With finite health care budgets, these democracies have health care policy-making mechanisms that explicitly address conflicts of interest between the individual and society and conflicts over resource allocation between primary care and other levels of care.^{21,22} Administrators of this policy-making process set priorities to allocate resources and to organize health care services that will meet policy goals. These western democratic governments provide patients ready access to family doctors and controlled access to high-cost technology and hospital care. Table 3 summarizes the common characteristics of these national health care systems.

These countries have established different types of national health care systems to assure universal access to health care. For example, the Canadians value the principle of egalitarianism to such an extent that private insurance and private medical practice are not allowed. The public system provides equivalent health care benefits to all Canadians. In contrast, the British government has recently encouraged the expansion of private health insurance, so that increasing numbers of patients are obtaining their medical care independent of the National Health Service. Thus, having an NHCS does not preclude the possibility of private insurance and private medical practice.

THE PREJUDICE AGAINST ESTABLISHING AN NHCS

Our society needs to understand the reasons why we do not have an NHCS and why we cannot assure that all Americans have access to affordable health care. Comparing the Universal Declaration of Human Rights with the Declaration of Independence provides a way of understanding why health care as a human right is not part of our health care policy. The United States signed the Universal Declaration of Human Rights, which specifically includes medical care as a right.^{15,16}

The inability of our society to fulfill this obligation has analogies to Thomas Jefferson's statement in the Decla-

ration of Independence that "all men are created equal." This moral ideal simply did not apply to blacks. Subsequently, the government introduced legal remedies to put this ideal into practice by outlawing slavery and giving blacks the right to vote. In effect, racial prejudice stood in the way of making Thomas Jefferson's statement become more of a reality.

In an analogous fashion, our society believes that health care is a human right but resists changes that would assure universal access to health care. The value system that governs our health care system stands in the way of achieving universal access to health care (Table 1). This value system is implicitly incorporated into our health care policy and consists of the following values: libertarianism, self-serving individualism, antisocialist rhetoric, antigovernment sentiment, the business ethic, and the sovereignty of the biomedical paradigm. These values shape the characteristics of our health care system, which sharply contrasts with other western democratic health care systems (Table 4).

This value system accounts for the economic and organizational barriers that prevent the uninsured and underinsured poor from gaining access to affordable health care. This set of cultural values forms the basis of our society's prejudice against having an NHCS. In effect, our health care system institutionalizes inequitable access to health care as a consequence of this prejudice.

Because of this prejudice, opponents of an NHCS have thwarted attempts to establish such a system on several occasions in the past.²³⁻²⁵ These reform failures testify to the power of this prejudice to obstruct the implementation of an NHCS. Our society needs to understand better how our values affect the economic and organizational aspects of our health care system. Then, proposals advocating equal access to health care, such as the National Health Program proposal,¹⁷ will have better prospects of assuring universal access to health care.

SELF-SERVING INDIVIDUALISM AND LIBERTARIANISM

American individualism has emphasized self-reliance in health care matters. The doctor and patient negotiated an arrangement for the provision of medical care. Then, insurance companies became intermediaries in this process to act in the best interest of the individual patient. Even with the involvement of third parties, the individual still has the responsibility to arrange for health care coverage.

Libertarianism endorsed "absolute freedom of choice" for doctor and patient. Advocates of this value maintained that doctors and patients should be free from societal and government infringements in how they negotiate the provision of medical care. Both of these cultural values have created a special kind of doctor-patient relationship. This relationship became encapsulated by a sacrosanct boundary and dissociated from its social context.

In effect, physicians act exclusively as the sole advocates for patients without regard to the effects of this relationship on society. During the cost-plus reimbursement era, insurance companies exploited this type of exclusive doctor-patient relationship and provided physicians with, in effect, an open checkbook for health care expenses. Health insurance became a growth industry. Physicians did not have to consider how the medical expenses of well-insured patients affected society as a whole.

This open system of financing health care persists and contributes to escalating health care costs,^{26,27} which amount to nearly 12% of our gross national product and result in a health care expenditure per capita that is the highest of any country in the world. Our concerns over rising health care costs will not affect this problem, as long as we refuse to say "no" in our "yes" society. Not surprisingly, in the absence of a national health care system, federal and state governments are severely handicapped in controlling health care expenditure.

In essence, the unchecked influence of self-serving individualism and libertarianism created a special kind of doctor-patient relationship. This relationship clearly benefited the well-insured patients, but it has had a cascade of ill effects for society as a whole. These ill effects include the following: the inefficient use of resources, the inappropriate use of modern technology, wide discrepancies in health care indexes between the rich and poor, and the uncontrolled rise in health care costs. These ill effects arose from the well-insured maximizing their freedom of choice, without considering how these choices would affect society at large, the uninsured, and the underinsured poor.

Advocates of a libertarian approach to health care conveniently overlook the fact that medical demand will always exceed supply and that free-market forces will not equitably resolve the conflict between the limited supply of and the continuing need for health care. Given this oversight, these advocates tolerate or even deny the meritorious system of rationing health care resources. The wealthy individuals are free to buy boutique medical care, and the poor are at liberty to choose free or charitable medical care, if available.

This libertarian attitude toward health care accounts for our inconsistent response in addressing the issue of access to health care. For example, prisoners are legally guaranteed health care, whereas the uninsured poor, imprisoned by their poverty, are not afforded equal treatment. The poor cannot afford to pay for doctors' visits and medications or for medical insurance. Thus, criminals have better access to health care than the uninsured poor. Our society responds more favorably to criminals whose illegal activities have resulted in the denial of their individual liberties than to the law-abiding poor whose liberties are curtailed by their poverty.

ANTISOCIALIST RHETORIC

Our society reflexively associates national health care systems with socialism. This mind-set accounts for predictably biased evaluations when we examine other national health care systems. The derogatory associations of totalitarian principles with socialism provide excuses for not seriously considering the advantages of other national health care systems. Furthermore, antisocialist rhetoric is used to discredit, for example, the advantages of the British and Canadian health care systems.

Overall, these countries have equivalent or superior indexes of health, yet spend less on health care than does the United States.²⁸ In spite of these documented advantages, certain disadvantages have become modern-day folklore, such as the unavailability of renal dialysis for patients over the age of 50 years or the long waiting lists for hip replacements in the British National Health System. These disadvantages have become effective propaganda against adopting a national health care system in the

United States. However, such propaganda is effective only because it magnifies the disadvantages while minimizing the overall benefits of these national health care systems.

The term "socialist" does not appropriately describe the health care systems in Canada and England, which are, respectively, referred to as National Health Insurance and the National Health Service.²⁹⁻³³ The key word is *national*, used in the same way as in the phrase *national education*. If we applied antisocialist rhetoric against national education, one would expect that the right to basic education for our children would depend on the economic resources of the parents.

Antisocialist rhetoric is effective in persuading people against establishing an NHCS. The power of this rhetoric makes us resist substantive and morally just changes in the political and health care systems. This rhetoric is inappropriately used to impede the goal of achieving affordable health care for all Americans.

ANTIGOVERNMENT SENTIMENT

In the past, the American Medical Association (AMA) has done its utmost to keep government out of the picture with regard to the clinical practice of medicine. The AMA has successfully used this antigovernment sentiment to block many reform initiatives. The AMA did not conjure up this sentiment in a social vacuum. In fact, the AMA capitalized on a prevailing sentiment of society for use as effective propaganda.

This antigovernment sentiment still exists and continues to undermine the role of government in organizing a national health care system. This sentiment persists in spite of the fact that all other western democratic governments have successfully adopted such systems and have insured that all of their citizens have equitable access to health care.

And yet, we do not use this sentiment against the government organizing our national defense! We entrust our government rather than individuals to act in the public good of society. In spite of many shortcomings, our national defense is one of the best in the world and protects all American citizens against external threats. In contrast, our aggregate health care indexes lag behind most western democracies.

THE BUSINESS ETHIC

Our society has treated health care as a commodity, which has led to the primacy of the business ethic in the health care delivery system. This ethic rationalizes the distribution of health care resources according to the economic characteristics of the individual. The business ethic in health care has ended professional immunity from antitrust laws and given rise to the medical-industrial complex.³⁴⁻³⁹

This ethic has also changed the health care delivery system. For example, two economic factors have been responsible for closing many hospitals: the high percentage of Medicaid recipients attending the hospital and the inadequate reimbursement for Medicaid patients. These closures have been to the detriment of the health care needs of the surrounding community.

The current reliance (despite rapidly fading optimism) on free-market forces purports to increase competition and efficiency in health care delivery, and to reduce health

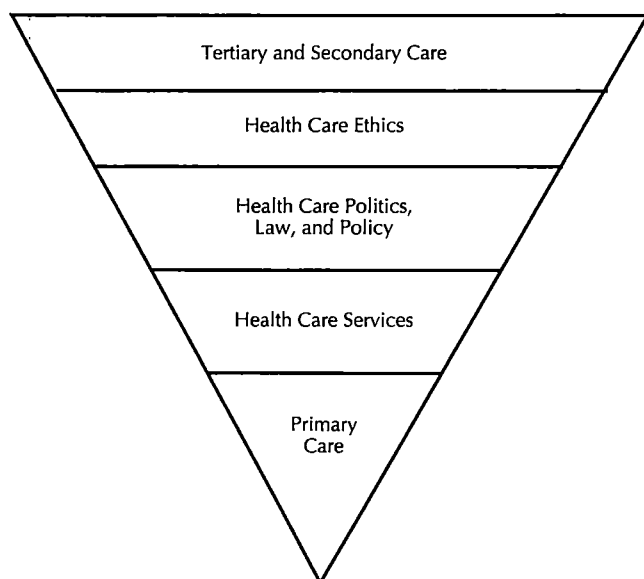


Fig. 2—The inverted hierarchy of our health care system; the sovereignty of the biomedical paradigm.

care costs.⁴⁰ In fact, the for-profit sector provides less charity care, avoids high-risk patients, and is not any more efficient than the nonprofit sector.^{34,41,42} The for-profit sector shows no promise of alleviating the ailments of the health care system, such as administrative waste or the poor distribution of physicians and health care resources.^{43,44} This sector, which is at liberty to divert profits away from the provision of health care in favor of investments in other business ventures, has no motive to restrict growth or to reduce the national expenditure for health care. This approach will not and cannot solve the problem of rising health care costs nor can it solve the problem of inequitable access to health care.

As a consequence of how the business ethic influences the administration of health care policies and debates about those policies, economic considerations override concerns for the basic health care needs of the uninsured. Too much time is devoted to concerns over who will pay for the rising costs of health care. Too little time is spent on how to set a finite budget on health care expenditure and on how to distribute limited resources equitably so as to maximize the health of all members of society.

SOVEREIGNTY OF THE BIOMEDICAL PARADIGM

As a society, we are captivated by the successes of the biomedical paradigm: the achievements of specialization, modern technology, and tertiary care. Our society places higher priorities on the values of this paradigm at the expense of primary care and long-term care. These priorities have given rise to sovereignty of the biomedical paradigm.

As a consequence, primary care has an inadequate number and poor distribution of physicians,⁴³ and long-term care is poorly organized within a two-tier system, ie, Medicaid and private pay.⁴⁵⁻⁴⁷ Without a controlled health care budget and without primary care physicians controlling access to more costly levels of health care, it is not surprising that cost containment measures have given only a temporary reprieve from rising health care costs.⁴⁸⁻⁵⁰

Together with the influence of the other values de-

scribed previously, the sovereignty of the biomedical paradigm has inverted the structure of the NHCS (Fig 2). This inverted hierarchy reflects how the values of the biomedical paradigm have been enshrined in our health care system. These values have had a pervasive influence over the direction of medical education, health care policy, and law. For example, New York State law regulates how a physician writes a do not resuscitate order. Thus, the law mandates standard treatment as patients exit the health care system but not as patients enter the system. The death-and-dying issues of secondary and/or tertiary care take precedence over the issue of access to health care at the primary care level.

WHY IS HEALTH CARE NOT A HUMAN RIGHT?

Viewed in the context of this value system, it becomes clearer why our society cannot put the moral ideal, health care as a human right, into practice. Health as a right can be viewed from different ethical perspectives. According to one perspective, rights can be categorized as negative or positive.⁵¹

A negative right can be regarded as a libertarian value; the individual's liberty is protected against infringements from society or the government. Individuals are responsible for their own health care. They can use their economic resources to buy whatever health care they choose. In contrast, a positive right can be regarded as an egalitarian value; the individual receives health care entitlements from the government. Then, government is responsible for ensuring that all Americans have equitable access to quality health care.

In a health care system with finite resources, the central conflict of values affecting health care policy is the right to individual liberty vs the right to equality. However, our society buys into the myth of unlimited resources. This myth helps our society to overlook our finite resources and to avoid this central conflict of values. This allows our society to place a higher value on a negative right over a positive right to health care.

Opponents of an NHCS, when predicting the impact of a system predicated on a positive right to health care, portray a scenario in which the health care system encourages the individual to make inordinate demands for medical services and becomes institutionally responsible for the health of all individuals.⁵² This distorted prediction overlooks the fact that demands for medical care will always exceed supply and that society can work toward setting limits on the demands for health care.

The addition of "basic" to the phrase "health care as a human right" avoids these criticisms by setting limits on the amount of health care that an individual can reasonably expect. Then, "basic health care as a human right" could be considered a negative right as the individual becomes protected against an infringement created by society, the economic and organizational barriers that block the individual from gaining access to adequate health care. In fact, categorizing this modified statement as a negative right highlights one limitation of defining rights in this dichotomous manner.

The classification of rights as negative or positive polarizes the issue of responsibility for health care into two options. Either the individual or society is responsible for health care. This classification oversimplifies a complex

issue, but it does capture the either/or mentality that permeates this health care debate.

This either/or mentality is also reflected in the way that we argue over who will pay for health care, eg, either the government or the employers. This mentality sets up different parties in opposition to one another, which makes these parties lose sight of the moral ideal of health care as a human right. This situation reduces the prospects of collaboration among federal and state governments, individuals and society, and physicians and the medical profession to assure that all individuals have equitable access to affordable health care. For example, our society could establish an NHCS that relies on the individual to assume as much responsibility as possible for his or her own health care, but when individuals are unable to assume this responsibility, individuals and society contribute to the efforts of their government to assure that all citizens have access to quality health care.

RESISTANCE TO ESTABLISHING AN NHCS

The argument for an NHCS often provokes a defensive counterargument that renders our society resistant to establishing an NHCS. This defensiveness arises from the perception that these arguments are attacks on highly cherished values that are an integral part of our health care policy. These values prevent our society from putting the moral ideal, health care as a human right, into practice. By understanding the reasons for this defensive reaction, our society may reconsider the priorities of the values affecting our health care policy.

The concept of enculturation helps to explain why this moral idea is not currently the governing principle of our health care policy. Our society has predominantly internalized a system of values that makes us prejudiced against establishing an NHCS. A dialectic tension exists between the value systems that do and do not support having an NHCS (Table 1). At present, values that do not support an NHCS hold sway in public policies.

Medical societies and associations, employers, hospital associations, medical insurance companies, trade unions, politicians, and society-at-large must be educated about the values that could help us establish a more equitable, health care system. These values include egalitarianism, societal-serving individualism, human rights, democratic principles, human services, and primary care.

Applying the concepts of prejudice, discrimination, and moral hypocrisy to this health care debate cannot be done without causing some defensiveness and discomforting controversy. Such a reaction will cause ethical dissonance, which occurs when the values of individuals and/or society are challenged by conflicting or alternative values such that individuals and/or society reevaluate their value system and consider other values. Health care debates are needed to generate ethical dissonance in society. Such debates could help our society to adopt the value system of an NHCS.

GENERATING ETHICAL DISSONANCE

Brief comments will be made about the values that are in conflict with one another (Table 1). These comments will be followed by questions that aim to generate ethical dissonance. The purpose of these questions go beyond the either/or debate on conflicting health care values and consider how to blend conflicting values in a manner that will assure universal access to affordable health care.

LIBERTARIANISM/EGALITARIANISM

In a health care system of finite resources, egalitarianism and libertarianism are in direct competition with one another. To date, the value of libertarianism has had a dominating influence on our health care policy at the expense of egalitarianism.

"To what extent is an individual at liberty to use resources at the expense of another individual's equality? And, to what extent does an individual's right to equality impinge on another individual's liberty?"

SELF-SERVING/SOCIETAL-SERVING INDIVIDUALISM

Self-serving individualism has been the prevailing ethos of the medical profession, and this ethos has clearly benefited the "haves" of society at the expense of the "have nots."

"To what extent should physicians be able to select their specialty choice and location of employment solely based on their self-interest and thereby shape the supply side of the health care delivery system? And to what extent should society regulate the distribution of specialists and the location of their employment based on the medical needs of the society?"

"To what extent should the 'haves' of society have access to the best possible medical care when the 'have nots' are unable to afford basic health care? And to what extent should the 'haves' subsidize the 'have nots' in gaining access to health care?"

ANTISOCIALIST RHETORIC/HUMAN RIGHTS

The overzealous use of antisocialist rhetoric is used to maximize the individual liberties of physicians and well-insured patients at the expense of the moral ideal of health care as a human right. Unfortunately, antisocialist rhetoric is used to work against our society trying to put this moral ideal into practice.

"How can antisocialist rhetoric be appropriately used to maximize the liberty of all individuals and physicians? How can the moral rhetoric of 'health care as a human right' be used to appropriately regulate the practice of medicine so that all Americans have access to affordable health care?"

THE ANTIGOVERNMENT SENTIMENT/ DEMOCRATIC PRINCIPLES

The antigovernment sentiment is used to persuade society that the government is incompetent to organize an NHCS. This sentiment also works against the use of democratic principles in the provision of health care.

"Can we trust our government to be responsible for the health of our nation, as we do our national defense? How can we use democratic principles to ensure that our government develops a highly effective NHCS that is accountable to the people?"

HEALTH CARE AS A BUSINESS/ HEALTH CARE AS A HUMAN SERVICE

Our society regards health care delivery more as a business than as a human service.

"To what extent should financial viability of a hospital or the medical needs of a community determine whether a hospital remains open or not?"

TERTIARY CARE/PRIMARY CARE

In a health care system of finite resources, community and hospital-based medical care are in direct competition

with one another for resources; this raises questions about the relationship between community and hospital-based medical care.

"Should primary care become the foundation of the health care system with primary care physicians being the first point of contact for all patients, or should patients have free access to any physician? To what extent should our society regulate the allocation of resources and reimbursement mechanisms to influence how primary, secondary, and tertiary care are organized?"

The purpose of generating ethical dissonance is to persuade the federal and state governments, the medical profession, employers, hospital associations, health insurance companies, and society-at-large that changing the value system of our health care policy is necessary to achieve universal access to health care.

CHANGING THE VALUE SYSTEM OF OUR HEALTH CARE POLICY

Advocating the values of an NHCS does not mean that we abandon the values that are currently incorporated into our health care ethic. Quite to the contrary, it is a matter of how these conflicting value systems are blended together. For example, the business approach to health care would become subservient to regulations based on the moral ideal of health care as a human right.

To achieve such a change, society must undergo a moral conversion to a new blend of ethical priorities. In this way, we will avoid patchwork reforms that incrementally change our fragmented health care system.⁵³ Such incremental changes will never solve the problems of inequitable access to health care and rising health care costs. Addressing this conflict of value systems will determine whether our society can solve these two problems.

The solution to these problems lies primarily in the moral domain: clarifying and changing the values of our health care ethic (see level 1, Fig 1). A well-articulated health care ethic that has widespread support will stabilize the direction of health care politics, policy, and law. Unfortunately, most discussion papers and debates on these problems rarely make explicit the conflict of value systems affecting our health care ethic.

Without understanding the conflict of values affecting our health care ethic, the political, policy, and financial debates on these two problems will continue to polarize the various participants in health care into opposing factions. These opposing factions will doom health care policy changes to vacillating incrementalism or stagnation, as in the recent case of the Catastrophic Health Care Bill or in the current issue of who will pay for the health care of the uninsured. Unless we commit ourselves to the health care ethic of an NHCS, reform plans will not be implemented for a period of time sufficient to solve these two problems and will fall victim to uninformed political debate, stop-gap efforts, and haphazard changes.

Not surprisingly, our democratic society will remain in violation of article 25, section 1, of the Universal Declaration of Human Rights. Advocating health care as a human right will not convince federal and state governments to assure that all Americans have access to affordable and quality health care.

Our government and society must be educated about the value system that supports the establishment of an NHCS (Table 1). Advocates for an NHCS must gain wide-

spread media coverage of this educational activity to triumph over our national equivocation on these health care issues.⁵⁴ First, our society must sufficiently understand and overcome its prejudice against having an NHCS. Second, the government must outlaw discrimination against the uninsured and underinsured poor.

To achieve these goals, this educational activity must generate massive, political support for an NHCS. All interested parties—medical societies and associations, employers, trade unions, hospital associations, health insurance companies, and activist groups—must lobby elected officials to overcome political inertia. Such lobbying efforts must persuade federal and state governments to initiate legislative reforms that would mandate health care as a human right. Such legislation would reduce discrimination against the uninsured and underinsured poor.

The government would then have to establish a finite budget on health care, set priorities democratically about what level of health care we can afford for all Americans, and develop an NHCS compatible with our culture. Such a health care delivery system may operate as a single-payer system organized by the government or consist of a pluralistic mix, eg, nonprofit private and public and, possibly, the for-profit sector. Until our society substantively changes and stabilizes the value system of our health care ethic, millions of Americans will go without adequate medical care, and the health care system will remain unjust.

References

1. Iglehart JK. Medical care of the poor: a growing problem. *N Engl J Med*. 1985;131:59-63.
2. Hayward RA, Shapiro MF, Freeman HE, Corey CR. Inequities in health services among insured Americans: Do working age adults have less access to medical care than the elderly? *N Engl J Med*. 1988;318:1507-1512.
3. Curtis R. The role of state governments in assuring access to care. *Inquiry*. 1986;23:277-305.
4. Darling H. The role of the federal government in assuring access to health care. *Inquiry*. 1986;23:295-306.
5. Ginzberg E. Medical care for the poor: no magic bullets. *JAMA*. 1988;259:3309-3311.
6. Schmidt D. The challenge of caring for the underserved. *Fam Med*. 1989;21:257-260.
7. Cohodes DR. America: the land of the free, the land of the uninsured. *Inquiry*. 1986;23:227-235.
8. Holloman JLS Jr. *Securing Access to Health Care*. Washington, DC: President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research; 1983;2:83.
9. Navarro V. What is the popular mandate? *N Engl J Med*. 1982;307:16-18.
10. Blendon RJ. The public's view of the future of health care. *JAMA*. 1988;259:3587-3593.
11. Danielson DA, Mazer A. Results of the Massachusetts referendum for a national health program. *J Public Health Policy*. 1987;8:30-35.
12. Schneider W. Public ready for real changes in health care. *Natl J*. 1985;17:665.
13. Holloman JLS Jr. *Securing Access to Health Care*. Washington, DC: President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research; 1983;1:33.
14. Curran WJ. The constitutional right to health care. *N Engl J Med*. 1989;330:788-789.
15. United Nations Universal Declaration of Human Rights. New York, NY: United Nations; 1948;25:1.
16. Browlie I. *Basic Documents on Human Rights*. New York,

NY: Oxford University Press; 1981.

17. Himmelstein DU, Woolhandler S, and the Writing Committee of the Working Group on Program Design. A national health care program for the United States: a physicians' proposal. *N Engl J Med*. 1989;330:102-108.

18. Enthoven A, Kronick R. A consumer-choice health plan for the 1990s: universal health insurance in a system designed to promote quality and economy. *N Engl J Med*. 1989;330:29-37, 94-101.

19. Hirt EJ, ed. *The Health Policy Agenda for the American People*. Chicago, Ill: American Medical Association; 1987.

20. The National Leadership Commission on Health Care. *For the Health of a Nation: A Shared Responsibility*. Ann Arbor, Mich: Health Administration Press Perspectives; 1989.

21. Thurow LC. Learning to say no. *N Engl J Med*. 1984;311:1569-1572.

22. Evans RW. Health care technology and the inevitability of resource allocation and rationing decisions: part I. *JAMA*. 1983;249:2047-2053.

23. Starr P. *The Social Transformation of American Medicine*. New York, NY: Basic Books Inc Publishers; 1982.

24. Califano JA. *America's Health Care Revolution: Who Lives? Who Dies? Who Pays?* New York, NY: Random House Inc; 1986.

25. Navarro V. Why some countries have national health insurance, others have national health services, and the US has neither. *Soc Sci Med*. 1989;30:887-898.

26. Fuchs VR. The counterrevolution in health care financing. *N Engl J Med*. 1987;316:1154-1156.

27. Relman AS. Dealing with conflicts of interest. *N Engl J Med*. 1985;3:747-749.

28. Navarro V. The public and private mix in the funding and delivery of health care systems: an international survey. *Am J Public Health*. 1985;75:1318-1330.

29. Relman AS. United States and Canada: different approaches to health care. *N Engl J Med*. 1986;315:1608-1610.

30. Iglehart JK. Canada's Health Care System, I. *N Engl J Med*. 1986;315:202-208.

31. Iglehart JK. Canada's Health Care System, III: addressing the problem of physician supply. *N Engl J Med*. 1986; 315:1623-1628.

32. Lister J. General prospects for the national health service. *N Engl J Med*. 1988;318:1473-1476.

33. Iliffe S, Haines A. Developments in British general practice. *Fam Med*. 1989;21:169-170, 175-176, 229-230.

34. Gray BH, McNerney WJ. For profit enterprise in health care. *N Engl J Med*. 1986;314:1523-1530.

35. Relman AS. Antitrust law and the physician entrepreneur. *N Engl J Med*. 1985;331:884-885.

36. Blythe SL. Megacorporate health care: a choice of the future. *N Engl J Med*. 1985;312:579-582.

37. Bromberg MD. The medical industrial complex: a national defense. *N Engl J Med*. 1983;309:1314-1315.

38. Schramm CJ. Revisiting the competition/regulation debate in health care cost containment. *Inquiry*. 1986;23:236-242.

39. Hillman AL, Nash DB, Kissick WL, Martin SP. Managing the medical industrial complex. *N Engl J Med*. 1986;315:1-3.

40. Himmelstein DU, Woolhandler S. Cost without benefit: administrative wastes in US health care. *N Engl J Med*. 1986;314:441-445.

41. Watt JM, Derzon RA, Renn SG, et al. The comparative economic performance of investor-owned chain and not-for-profit hospitals. *N Engl J Med*. 1986;314:89-95.

42. Kinzer D. The decline and fall of deregulation. *N Engl J Med*. 1988;318:112-116.

43. Petitti DB. Competing technologies: implications for cost and complexities of medical care. *N Engl J Med*. 1986;315:1480-1483.

44. Barnett PG, Midtling JE. Public policy and the supply of primary care physicians. *JAMA*. 1989;262:3064-3068.

45. Health and Public Policy Committee. Long-term care of the elderly. *Ann Intern Med*. 1984;100:760-763.

46. Kane RA, Kane RL. The feasibility of universal long-term care benefits: ideas from Canada. *N Engl J Med*. 1984;312:1357-1364.

47. Moon M. Taking the plunge: the arguments for a comprehensive long-term care system. *J Am Geriatr Soc*. 1989;37:1165-1170.

48. Ginzberg E. Is cost containment for real? *JAMA*. 1986;256:254-255.

49. Schwartz WB. The inevitable failure of current cost containment strategies. *JAMA*. 1987;257:220-224.

50. Ginzberg E. A hard look at cost containment. *N Engl J Med*. 1987;316:1151-1154.

51. Beauchamp TL, Faden RR. The right to health and the right to health care. *J Med Philos*. 1979;4:118-131.

52. Sade R. Medical care as a right: a refutation. *N Engl J Med*. 1971;285:1288-1292.

53. Dickman RL, Ford AB, Liebman J, Milligan S, Schorr AL. An end to patchwork reform of health care. *N Engl J Med*. 1987;317:1086-1088.

54. Levey S, Hill J. National health insurance: the triumph of equivocation. *N Engl J Med*. 1989;321:1750-1754.

Universal Access to Health Care

A Comprehensive Tax-Based Approach

Jack A. Meyer, PhD; Sharon Silow-Carroll, MSW, MBA; Carl J. Sardegna, MBA

● More than 30 million Americans lack health insurance, and millions more are "underinsured." Meanwhile, the cost of health care in the United States is escalating, and some of our care is of questionable value. This article presents a health care reform strategy that addresses these three fundamental problems in the US health care system. The strategy, designed to empower consumers to make cost-conscious health care choices, combines a universal tax credit that enables all Americans to purchase basic health coverage; insurance reforms including pooling and reinsurance mechanisms; requirements that all employers make insurance available to their employees and that all consumers purchase coverage; and efforts to measure and improve the quality and efficiency of health care services. This strategy would help us to achieve universal health insurance coverage, while creating the proper incentives for cost control. In addition, it can be largely internally financed through savings automatically triggered by its implementation.

The purpose of this article is to describe a new approach to achieving universal health insurance coverage in the United States in a way that also creates the proper incentives for cost control. The United States faces a dilemma now. More than 30 million Americans lack coverage, and millions more are underinsured against the threat of "catastrophic" expenses. At the same time, health care costs are rising sharply, and broadening coverage without making major structural reforms is likely to accelerate cost escalation. Furthermore, purchasers of health services are often uncertain about the value they are getting for their money, as they lack adequate measures of quality of care.

This article presents a strategy that addresses the problem of access, cost, and quality in the US health care system. This strategy builds universal coverage and cost-control incentives into the system. It involves new government spending, but the plan can be largely internally financed through a redistribution of existing resources and offsetting savings automatically triggered by its implementation. While the plan is not completely tax neutral, the gap between its costs and the automatic savings is manageable, and could be closed in a variety of ways. Furthermore, the long-run economic and social benefits of achieving universal coverage—better health and

hence greater productivity—may be worth the extra initial investment.

BASIC PRINCIPLES

To address the access, cost, and quality problems simultaneously, some type of fundamental reform is clearly needed. The following principles should guide our efforts:

- No one should be denied access to necessary care for financial reasons.
- Consumers should be empowered to purchase health care coverage for themselves.
- Cost discipline must be built into efforts to expand access, and consumers should share in the financial consequences of their choices.
- No one should be excluded from receiving subsidies because of arbitrary characteristics such as family or welfare status.
- Subsidies should not be "open-ended"; ie, they should not automatically ride up with health care cost escalation.
- Better information about the appropriateness of medical care and the comparative performance of health care providers must be generated and disseminated to improve our control over the quality of that care.
- Incentives are preferable to controls as a means to expand access, control costs, and improve quality.
- Risks should be spread over large groups to maintain affordability of insurance for individuals.

THE STRATEGY

The strategy presented here uses the above principles to help achieve universal access to health care coverage, create mechanisms for pooling risks for the millions of Americans who are uninsured, encourage cost control, and establish the means to evaluate and improve the quality of health care. The unique feature of this strategy is that it combines into one package a variation of Enthoven's¹ original approach based on universal tax credits with a plan for assuring that employers make a group insurance vehicle available to workers; insurance market reforms to assure that no one is denied care as a result of his or her current health status; personal responsibility among consumers for acquiring coverage and for the cost consequences of their choices; and a greater emphasis on measuring quality and rewarding providers who practice medicine that is likely to produce good health outcomes.

Thus, our plan provides both the means and the mechanisms to assure universal coverage. It does this in a way that also builds cost discipline into the health care system and promotes the delivery of high-quality care.

Accepted for publication March 20, 1991.

From New Directions for Policy, Washington, DC (Dr Meyer and Ms Silow-Carroll), and Blue Cross and Blue Shield of Maryland, Owings Mills (Mr Sardegna).

Reprinted from *Archives of Internal Medicine* (1991;151:917-922).

The primary components of this strategy are as follows:

- Empowerment of the consumer through *universal, refundable tax credits* for the purchase of health insurance
- Requirement that *employers offer* group insurance to their employees
- *Pooling* mechanism to help spread risk over large groups and to make available *group coverage to the unemployed*
- *Reinsurance* mechanism to protect carriers from inordinately high risks
- Requirement that all *consumers purchase* basic health coverage
- Ongoing efforts to *measure and improve quality* of care

Universal, Refundable Tax Credits

The means for assuring universal coverage would be a refundable federal income tax credit for all Americans that could be used exclusively for the purchase of health insurance. This approach is a variant of the tax credit proposal first put forth by Enthoven.¹ The credit would be sufficient to cover a substantial portion of the premium cost for a *basic* insurance plan. The refundability feature means that households with no federal tax liability would still get the credit. People who do not file federal income tax forms would simply fill out a one-page form (or it could be a preprinted postcard) and send it to the Internal Revenue Service. They would get a "refund" even though they paid no taxes.

The tax credit would *replace both* the Medicaid program (the acute care portion) and the current federal tax provision that allows employees to exclude from taxable income the full value of employer contributions to health insurance plans. As the current open-ended tax exclusion disproportionately benefits higher-income Americans and fails to provide any assistance to many lower-income people, while the proposed tax credit would benefit *all* Americans, this strategy distributes resources more equitably.

In the short term, Medicare would remain in place to serve older Americans and the disabled. We may consider incorporating the Medicare program into the overall strategy sometime in the future. Reforming the financing of long-term care is another important challenge, but is beyond the scope of this proposal.

By placing consumers in a situation in which they are assured of the basics in health care, but must help pay the cost of additional, "extra" services using after-tax dollars, this tax credit approach brings the consumer more directly into the health care picture and helps build cost discipline into the system. Consumers will be more sensitive to the cost implications of their choice of plans, and will presumably seek out and select the more efficient policies.

In addition, the tax credit would be fixed in value for any given year, and would be updated annually for general inflation (not medical inflation). It could be adjusted for measurable changes in technology, labor, or capital costs, but would not ride up automatically with health care costs. This would help to prevent the type of sudden cost escalation associated with the introduction of Medicare and Medicaid, when public reimbursement for health care services had no limits. Rather, the tax credits, held at reasonable levels, would put some pressure on providers to keep the volume of services in check and to reduce unnecessary services and "waste" in the system. This process

would be facilitated in the long run by outcomes research and quality measurement, discussed further below. Additional cost containment could result in the long run from bringing basic and preventive health care to the millions of Americans who are currently not receiving these services.

To assure affordability of basic coverage, the subsidy would be greater for low-income individuals and families. Subsidy categories could also be based on the current distinction between "self" and "family" insurance policies. A third, "self plus one dependent" category could also be considered. Within these categories, age brackets would be established (eg, at 5-year intervals for both men and women) to reduce cross subsidies.

Requirement That Employers Offer Group Insurance

All employers, including small groups and self-insured businesses, would be required to offer at least two "qualified" group insurance plans to their employees. At least one of the plans offered must be a low-cost, "basic" plan that would be limited to coverage for hospitalization, physician visits, x-rays, laboratory work, and limited mental health benefits. Employers would not be required to fund health benefits since the tax credit largely serves this purpose.

The second health plan offered must include at least the basic insurance package provisions. All qualified plans must include some cost sharing (deductibles and copayments) to help contain costs and a stop-loss provision to protect consumers against catastrophic costs associated with major illness. The requirement to offer at least two plans, only one of which must be limited to basic benefits, permits employers to continue to offer a plan that is more comprehensive than the basic plan, rather than being required to scale down their existing plan. Consumers could then buy the more comprehensive plan as a package, instead of being forced to buy coverage for extra services "a la carte."

Requiring employers to offer a low-cost, basic plan ensures all workers and their families access to coverage for the most critical health care services. This provision requires the preemption of current state laws that mandate more comprehensive and expensive benefit packages and that result in consumers facing an "all-or-nothing" situation. The new strategy provides that no one goes with "nothing," and that consumers who want "all" or "more" could purchase additional coverage with unsubsidized dollars.

Employer contributions to the cost of a group health insurance plan would presumably drop sharply following the enactment of a universal tax credit. Employers might continue to contribute an amount that covers some previously covered services that are not included in the basic plan (eg, dental services and vision care). But consumers would pay the bulk of insurance premiums themselves, using the tax credit to cover their costs.

To avoid cash flow problems arising from the fact that their tax credits for one year cannot be claimed until they file their federal income taxes in the following year, employees could adjust their withholding allowances. This, in effect, would enable them to receive the value of the tax credit in continuous increments, reflected in higher take-home pay.

Insurance Reform: Pooling Mechanisms and Reinsurance

One of the principles behind this strategy is that risks should be spread over large groups to maintain affordability for all purchasers. To achieve this, we must set some rules of the game for the private insurance industry.

To assure that the tax credit covers most of the cost of the basic benefit package for all Americans, we propose certain limitations on rating practices. Insurers would be allowed to adjust rates for certain demographic factors such as age and gender. To preserve the incentive to maintain healthy life-styles, they could also impose a surcharge on premiums for unhealthy behaviors such as smoking and substance abuse. They could not, however, vary premiums based on the health status or medical history of beneficiaries.

A second aspect of spreading risks involves pooling those people who are not part of an employer-sponsored group insurance plan. Nonprofit agencies acting as brokers would be licensed to enroll the unemployed, along with part-time and seasonal workers, and bring them into the mainstream health system. The individuals who enroll with these brokers would turn over their tax credits to them when they are received. In effect, the brokers would loan their enrollees the amount of the tax credit, to surmount the cash flow problems that these people, who are not working full time, would otherwise experience.

Broker agencies would negotiate rates for their enrollees with carriers and choose health insurance plans, as an employer would do. The agencies would also perform such functions as educating those who are not familiar with insurance procedures or options and then helping them choose an insurance plan, sign up, pay premiums, fill out claims forms, and keep appropriate records. The public sector would establish guidelines and provide oversight for these agencies.

Germany has been successful with the use of brokers who pool risks and negotiate rates on behalf of consumers. German associations called *Krankencasse* are organized on the community, guild, and employer levels. These organizations negotiate physician fees with medical societies.

A third type of insurance reform involves reinsurance. States would legislate the formation of reinsurance pools, to which all health insurers and self-insured employers would contribute premiums. The reinsurance would kick in once medical costs exceeded a certain threshold amount.

A cost-effective approach would involve reinsuring selected high-risk individuals in a plan that includes deductibles and copayments. Other cost management techniques frequently used in conventional health insurance plans, such as case management and utilization review, should also be included in the reinsurance plans.

With this reinsurance mechanism to protect insurance carriers that have relatively large numbers of high-risk enrollees from catastrophic losses, additional insurance reforms could be enacted. These include mandating open enrollment, prohibiting preexisting condition exclusions, and enforcing guaranteed renewability of coverage for as long as a person remains in the covered group. The basic purpose of these reforms is to assure initial access to coverage for all Americans and to protect those who become ill or disabled.

Requirement That Consumers Purchase Coverage

Once all of the above mechanisms are put in place, a requirement would be enacted that all consumers *purchase* a qualified insurance plan. This would reduce the current "free-rider" problem, where some people who could afford coverage choose to go without it, and when they do incur high medical expenses, much of these costs are passed on to others. Coupled with the refundable tax credit that helps to provide the financial means, mandatory purchasing should truly allow us to approach universal health coverage.

Quality Measurement Efforts

The twin problems of rapidly rising costs and inadequate access due to coverage gaps are interwoven with a third problem: the lack of adequate measures of quality in health care. There is mounting evidence that many procedures and tests are of questionable value, if not unnecessary, or, in some instances, even harmful. And there are also indications that some doctors and hospitals are much better than others in producing desirable health outcomes. Public and private purchasers of care often simply do not know what value or results they are getting for their money.

While the primary goals of this strategy are to improve access to health care and control costs, the plan also includes measures aimed at improving the quality of care provided. This begins with efforts to understand and measure "quality" in health care.

Gaining an understanding of quality is critical, not just to improve the kind of care being received, but also as the key to controlling the utilization and, hence, the costs of medical services. Purchasers and individual consumers of care must develop the ability to discuss cost and quality tradeoffs with providers, instead of just haggling over price. To do this, they need to understand and be able to gauge several distinct dimensions of quality: necessity, appropriateness, effectiveness, satisfaction, and efficiency.

To accomplish this, employers and group administrators need to agree on and use a uniform data system within a community. Information on providers' cost and outcomes, adjusted for such factors as case mix, should be assembled and made publicly available to all payers. These efforts can be initiated by statewide data commissions and supplemented by private efforts.

This type of outcomes research would enable those selecting health plans to compare the performance of doctors, hospitals, and other health care providers and to steer their group members to the most effective providers. This is not an easy or a quick process. But over time, the careful collection and analysis of clinical severity-adjusted data would lead to the development of medical practice guidelines and protocols. This should help to reduce unnecessary care and to improve the quality and efficiency of health care services in the long run.

ESTIMATING THE COST OF THE TAX CREDIT STRATEGY

The cost of the new strategy described above depends on a number of variables—the first being the exact amount of the tax credit. The credit would equal a portion of the full cost of the premium for the basic plan.

For individuals and families with incomes below the poverty line, the subsidy should equal 100% of the premium for basic health insurance. The tax credit should

Table 1.—Estimated Cost of a Refundable Tax Credit for the Non-Medicare Population (in Billions of 1989 Dollars)*

Income Group	Basic70	Basic80
Below poverty line (100% subsidy)		
Individuals	4.37†	4.99
Families	16.83	19.24
100% to 200% of poverty line (80% subsidy)		
Individuals	3.72	4.25
Families	14.32	16.37
Above 200% of poverty line		
Sub50 (50% subsidy)		
Individuals	9.60	10.97
Families	37.01	42.30
Sub70 (70% subsidy)		
Individuals	13.44	15.36
Families	51.82	59.22

*See "Estimating the Cost of the Tax Credit Strategy" section of the text for definitions of terms.

†Sample calculation: 4.46 million individuals below poverty $\times$ 100% subsidy $\times$ \$980. Basic70 plan cost = \$4.37 billion.

then be scaled down as income increases, until it reaches the "standard" subsidy at a designated income level.

There are many options for, and considerations involved in, setting the standard subsidy. It should be a high enough proportion of the cost of premiums to assure that everyone can afford basic insurance, as this is the purpose of our strategy. However, as Enthoven¹ has noted, if the tax credit covers too much of the premium cost, incentives for health plans to be efficient are weakened, and premiums—not to mention health care costs in general—could soar.

Other considerations are the availability of funds and the degree to which society chooses to have wealthier Americans subsidize poorer ones; eg, the subsidy could be based on a sliding scale, ranging from 100% of basic plan premium for those in poverty, down to 30% or 40% for those with incomes above \$150 000. If a less "progressive" system is desired, then the subsidy could be a straight percentage for everyone whose income is above 150% of the poverty line.

For the purpose of making initial cost estimates, we will assume a 100% subsidy for those in poverty, 80% for those with incomes between 100% and 200% of the poverty line, and alternative scenarios of 50% and 70% subsidies for all other Americans. We will call these two scenarios *Sub50* and *Sub70*, respectively.

We use the figure of 80% for the near poor as illustrative of the need for a gradual phasedown of the tax credit. The advantage of picking one rate for a range such as 100% to 200% of the poverty line is that it is not administratively complex. A disadvantage is that it may impose greater hardship on those closer to the poverty line who are not receiving contributions from their employers that would cover the remaining 20% of the cost of insurance. It would be possible to graduate the subsidy within the near-poor range without significantly affecting the overall cost estimates.

The cost of the basic plan could also vary considerably, depending on the exact levels of coverage, copayments, deductibles, and stop-loss thresholds. The "average" plan

Table 2.—Estimated Total Cost of Tax Credit Under Four Scenarios (in Billions of 1989 Dollars)*

	Basic70	Basic80
Sub50	85.85	98.12
Sub70	104.50	119.43

*See "Estimating the Cost of the Tax Credit Strategy" section of the text for definitions of terms.

costs approximately \$1400 for individuals and \$2700 for families.² Our basic plan is meant to be a somewhat scaled-down, "bare necessities" version of today's average plan, but we acknowledge that it is the basic physician and hospital coverage that constitutes the bulk of the average plan premium. Therefore, we calculate costs under two further scenarios: the first assumes that the basic plan would cost 70% of the current average plan, and the second assumes that the basic plan would cost 80% of the current average plan. These assumptions are based on current examples of scaled-down insurance policies that feature significant cost-sharing, provider discounts, and managed care. We call these scenarios *Basic70* and *Basic80*, respectively.

Thus, we derive rough cost estimates under four alternative sets of assumptions: *Sub50/Basic70*, *Sub50/Basic80*, *Sub70/Basic70*, and *Sub70/Basic80*. Subtotals for the various income groups are presented in Table 1. The total cost estimates for the refundable tax credit under the four alternative scenarios are presented in Table 2. The total cost is shown to range from approximately \$86 billion to \$119 billion. (Additional data and assumptions used in cost calculations are available from the authors on request.)

FUNDING FOR THE TAX CREDIT

Funding for the refundable tax credit would come from four sources. First, the acute care portion of Medicaid would be replaced by the subsidy, "freeing up" Medicaid funds. Second, employer contributions to health insurance would drop sharply, increasing business profits, which would result in higher tax revenues from those profits. Third, the largest employer—the government—would save a considerable amount in direct contributions to health coverage for its employees. Fourth, the remaining employer contributions to health insurance premiums would no longer be excluded from taxable income, thereby increasing revenues from individual income taxes.

In addition to these direct savings, long-run, system-wide efficiencies would result from (1) more prudent purchasing of insurance plans and health care services as consumers are faced with financial incentives to reduce waste and overutilization; (2) a reduction in the cost shift from nonpaying to paying consumers and from public to private third parties; and (3) the decrease in expensive tertiary care resulting from better access to primary, preventive care. To the extent that these efficiencies reduce overall health care spending, resources would be freed up for investment in other sectors of the economy. In particular, employers would have more funds available for private investment. The magnitude of these potential savings and economic growth, however, is difficult to project, and they are not counted in short-term budget estimates.

To estimate the Medicaid savings, we must separate long-term-care outlays, which would continue. We count here only the savings from the acute care part of the pro-

Table 3.—Estimated Funding for Tax Credits (in Billions of Dollars)*

	Sub50/Basic70	Sub50/Basic80	Sub70/Basic70	Sub70/Basic80
Medicaid savings	34.60	34.60	34.60	34.60
Business tax increases	13.71	15.67	19.19	21.93
Reduced insurance outlays for public employees	8.40	9.60	11.76	13.44
Elimination of tax exclusion	12.66	10.92	7.79	5.36
Total Funding	69.37	70.79	73.34	75.33

*Estimates of Medicaid Savings and Elimination of Tax Exclusion are based on 1989 dollars. Estimates of Business Tax Increases and Reduced Insurance Outlays for Public Employees are based on 1988 dollars. See "Estimating the Cost of the Tax Credit Strategy" section of the text for definitions of terms.

gram. Moreover, about 45% of such savings will accrue to states. Thus, a mechanism must be worked out to garner these savings and use them to help finance the new tax credit. One possible method is to deduct the projected state savings from federal payments to states for the long-term-care portion of Medicaid. Alternatively, the government could reduce federal grants to states for nonhealth programs. Developing the precise mechanism for recapturing state savings for federal use is a difficult task, and the full 45% may not be captured. In the short run, federal budget planners may need to substitute other funding sources. However, the purpose of this analysis is to assess the overall, *system-wide* savings, which would include savings to states. From a system-wide perspective, an estimated \$35 billion would be saved by eliminating the acute care portion of the Medicaid program.

We cannot estimate precisely how much employer contribution to health insurance will fall. Clearly, this would vary from firm to firm, as some employers "supplement" the tax credit while others do not, and the extent of supplementation would vary. Industries providing very expensive coverage now, and their employees, would be confronted with the financial costs and tradeoffs of adding coverage "at the margin," for unlike the present situation, these additions would be counted as taxable income and would not be underwritten by government.

We can make a rough estimate of employer cutbacks by assuming that they would reduce their contributions by the amount of the tax credit. This means that employers who had been contributing an amount exceeding the tax credit would continue to pay the difference between the credit amount and their previous contribution, thereby protecting workers from sudden increases in out-of-pocket costs. Under this assumption, the tax credit for the employed population would reduce employer contributions by an amount ranging from \$50 to \$81 billion, depending on the subsidy scenario. This, in turn, would increase profits for nongovernment employers. We assume that employers would shield some of these savings from taxable income, and that only about 80% would be counted as additional profits and taxed at a 34% corporate income tax rate. This would result in an increase of \$14 to \$22 billion in tax revenues.

The precise response of employers and workers to a decline in employer health care outlays is uncertain. It is likely that a significant portion of the initial increase in business profits will end up as higher wages for workers. Indeed, some workers may seek and receive higher wages to compensate them for the additional taxes they will have to pay if they want to maintain coverage that exceeds the

value of the tax credit. To the extent that this occurs, it will reduce the amount of additional business profits emerging from this plan. But higher wages yield higher personal income taxes. Thus, to the extent that employers' financial gain from this proposal is passed along to workers in the form of higher wages, the revenue gain will take the form of personal rather than corporate income taxes.

If, however, employers are able to shield more savings from both profits and wages, the revenue would be reduced, but this would not significantly affect the overall magnitude of our total revenue estimates; eg, assuming that 50% of employer savings were shielded and only 50% were taxed (as opposed to 80%), the revenues would range from \$9 to \$14 billion.

The estimates of federal savings do not include the likely savings to local and state governments, which, if counted, would raise overall savings considerably. Rather, we chose a more conservative approach, assuming that this "windfall" to states would further enable the federal government to recapture the full Medicaid savings to states discussed earlier.

The third source of savings is in direct government outlays for health insurance for its employees. We would expect federal, state, and local governments, as employers, to reduce their contributions to employee health care coverage by the amount of the tax subsidy. While these savings would not be seen as increased "profits" to be taxed, they are direct "dollar-for-dollar" savings to the government. Again, a mechanism must be worked out to channel not only federal but also state and local savings toward the new tax credit. Under the four alternative subsidy scenarios, estimates of these public outlay savings range from \$8 to \$13 billion.

The fourth source of funding for the tax credit is the elimination of the federal income tax exclusion. While employer contributions to employees' health care coverage will decline (as noted above), the remaining contributions will no longer be excluded from employees' taxable income. This will provide additional tax revenues. Under the four subsidy scenarios, the estimated increase in federal income tax revenues ranges from \$5 to \$13 billion. (Again, these are conservative estimates as they do not include increases in state and local income tax revenues.)

Table 3 summarizes the estimated funding sources under the four subsidy scenarios. The estimates of total funding range from \$69 to \$75 billion. (Additional data and assumptions used in these calculations are available from the authors on request.)

Table 4. — Tax Credit Funding "Shortfall"
(in Billions of Dollars)*

	Estimated Cost	Estimated Savings	Difference
Sub50/Basic70	85.85	69.37	16.48
Sub50/Basic80	98.12	70.79	27.33
Sub70/Basic70	104.50	73.34	31.16
Sub70/Basic80	119.43	75.33	44.10

*See "Estimating the Cost of the Tax Credit Strategy" section of the text for definitions of terms.

MEETING THE FUNDING SHORTFALL

The cost and revenue estimates presented here are intended to describe the general order of magnitude of the refundable tax credit strategy. The reader may or may not agree with all of the assumptions used, and may choose to substitute his or her own.

According to this analysis, 63% to 81% of the cost of the program would be internally financed. The funding shortfall ranges from \$16 to \$44 billion, as displayed in Table 4.

While the majority of the cost of the program is automatically covered under all four scenarios, to be politically feasible and fiscally responsible any new major program must be budget neutral. Accordingly, this strategy should be linked with other measures that would provide additional funds to meet the new costs of the program, ie, by raising additional revenues or by reducing current expenditures.

On the revenue side, potential sources include increasing marginal tax rates for individuals and corporations, raising the payroll tax rate or the base to which it is applied, increasing excise taxes or instituting a value-added tax, and applying existing tax rates to some income that is currently not taxed, such as portions of employee benefits and retirement benefits. On the expenditure side, significant savings could be achieved through reductions in national defense outlays and entitlement programs that are not means tested. Some combination of these (or other) approaches could undoubtedly provide the needed funds.

The main point is that the funding shortfall is manageable, and appears to be a reasonable price to pay in order to extend coverage to all Americans. In addition, this up-front investment will likely result in a more efficient health care system and a stronger US economy.

CONCLUSIONS

This article has described a new approach to achieving universal health insurance coverage in the United States with built-in cost discipline. It has regulatory as well as market features, and it includes important requirements for employers and consumers.

The centerpiece of the strategy is a system of universal, refundable tax credits. These credits would replace both the acute care portion of the Medicaid program and the current tax exclusion associated with employer contributions to health insurance. The tax credits provide the majority of the *funding* for universal coverage. Other features of our plan provide the *insurance mechanism* and the *risk-spreading* needed to assure that all consumers can afford basic coverage, regardless of their current health status. With these features in place, everyone would be required to purchase insurance coverage—there would be no free rides.

Furthermore, rough estimates show that the majority of the cost of this plan would be "internally financed" by expenditure reductions or revenue increases that would occur as a result of the program.

We cannot claim that this strategy is administratively simple. The very elements mentioned above that would *improve* the health care system may also add a layer of complexity. Yet none of the reforms is completely untried: subsidies based on factors such as income can be found in our current tax system; consumer cost-sharing is practiced in the private insurance system and in many social welfare programs; and reinsurance is currently used with other forms of insurance.

Still, administrative complexity should not be ignored. It should, however, be considered within the context of *tradeoffs*. This strategy addresses the major problems within our health care system, while maintaining a largely private sector orientation. As a result, the proposal may be more politically feasible than a complete replacement of our current system with a national health plan. While a system such as Canada's public insurance program may be easier to administer, it would likely face greater political opposition in this country.

At the other end of the spectrum, proposals that are *less* comprehensive than the strategy presented here may be cheaper and easier to implement and may face less opposition, but they are much less likely to achieve our goals of universal access and cost containment.

The strategy presented here is not the only possible solution to the access problem in the United States. Yet it represents one approach that would help to achieve universal access, to control escalating costs, and to improve the quality of our health care system in a fiscally responsible way.

References

1. Enthoven AC. *Health Plan*. Reading, Mass: Addison-Wesley Publishing Co; 1980.
2. Gabel J, DiCarlo S, Sullivan C, Rice T. Employer sponsored health insurance, 1989. *Health Aff (Milwood)*. 1990;9:161-175.

Insuring the Uninsured Is Not Enough

James E. Dalen, MD, Jose Santiago, MD

Many Americans have access to some of the best health care in the world. Others are not as fortunate. Health care expenditures in the United States, already the highest in the world, continue to increase at a seemingly uncontrolled rate. From 1980 to 1989, US health care expenditures increased by 128%.¹ Despite this tremendous investment in health care, our system is increasingly coming under attack. The quality of US health care, as judged by indexes such as infant mortality, does not compare well with other countries that spend much less on health care.

The May 15, 1991, issue of the *Journal of the American Medical Association* and the May editions of the American Medical Association's (AMA's) specialty journals focus on another critical defect in our health care system—more than thirty million Americans have no health insurance; additional millions are underinsured. Friedman¹ estimates that the percentage of our citizens who are uninsured or underinsured on any given day could be as high as 25%. Ginzberg and Ostow² estimate that we fail to provide effective medical care to about a third of our population.

Of the more than 30 million Americans who have no medical insurance, more than 75% are workers or their families. The basic reason that so many Americans are uninsured or underinsured is that they simply cannot afford medical insurance. Our increasing health care expenditures drive health insurance premiums higher and higher. We must address the "interdependent problems of rising costs and declining access."³

The widespread lack of adequate medical insurance has important health and financial consequences. A recent survey of the uninsured in Arizona demonstrated that they were less likely to have a primary care physician and less likely to receive needed medical care than those Arizonans who had medical insurance.⁴

The impaired access that results from lack of adequate medical insurance has a high price for society. Medical care for the underinsured is far more likely to involve care in the emergency department than in a primary care physician's office. The increased costs are borne by providers as free care, or by society via cost shifting. The lack of preventive care further increases costs to society. The lack of prenatal care, for example, increases the probability of care in a neonatal intensive care unit. Failure to detect and treat hypertension increases the likelihood of hospitalization and care in the intensive care unit for stroke, myocardial infarction, or congestive heart failure. Failure to

prevent these complications results in increased costs of medical care and loss of productivity.

It is clear that insuring the uninsured and underinsured is in everyone's best interest. The May 15th issue of the *Journal of the American Medical Association* and the May issues of the AMA's specialty journals present a wide variety of proposals to insure the underinsured.

In reading these articles, it soon becomes clear that our mission is far more than just insuring the uninsured. There are overt deficiencies in health care coverage in those Americans who are currently insured by Medicare, Medicaid, and private insurers. Just having an insurance policy is not enough. Given the magnitude of our nation's health care expenditures, our goal should be to ensure universal access to quality health care to all of our citizens regardless of ability to pay or type of health care insurance.

The proposals in the special issue of the *Journal of the American Medical Association* and the AMA's specialty journals have as their goal the provision of health insurance to all Americans. Most of the proposals would preserve the three dominant payers: Medicare, employer-provided private insurance, and Medicaid for the poor. Medicare is retained in its current form or is expanded in most proposals. Nearly all plans focus on the fact that most of the uninsured in the United States are workers and their families.

Most plans mandate that employers provide insurance to all employees or pay a payroll tax to be used to provide insurance. The plans vary in how they would assist employers, especially small businesses, by means of tax credits or other mechanisms, to meet this obligation. These proposals stress that insurance premiums should be based on "community rating" rather than "experience rating." The use of experience rating, which charges higher premiums for those most likely to seek medical care, is one of the reasons that small businesses cannot afford to provide medical insurance to their employees.

Medicaid has failed its mission of providing health insurance to the poor. Most low-income men and childless couples are excluded regardless of their poverty status.¹ Almost half of Medicaid expenditures are for the long-term care of the elderly in nursing homes and the long-term care of the mentally ill and mentally retarded.⁵ Medicaid's mission of providing coverage for the poor is further eroded by the fact that each state sets its own eligibility criteria. In some states, income must be as low as 13% of the federal poverty level to be eligible for Medicaid. By 1989, it was estimated that only 40% of the population living in poverty was covered by Medicaid.¹ Most of the proposals recommend expansion of Medicaid such that it covers all who are below the federal poverty level. Some recommend that Medicaid be replaced by a new federal program for the

Accepted for publication April 11, 1991.

From the Editor of the *Archives of Internal Medicine* (Dr. Dalen) and the Department of Psychiatry, College of Medicine, University of Arizona, Tucson (Dr. Santiago).

Reprinted from *Archives of Internal Medicine* (1991;151:860-862).

poor^{6,7} or be folded into Medicare.⁸

Most of the proposals conclude that a restructuring of our current three major payers, Medicare, employee-based insurance, and Medicaid (or an alternative plan for the poor), can achieve the goal of providing all Americans with basic medical insurance coverage.

Two of the proposals^{3,8} suggest that our current pluralistic approach has failed and should be replaced with a single-payer national health program, financed by taxes. The obstacles to the implementation of a national health program at this time are formidable. Enthoven and Kronick⁹ estimate that implementation of a national health plan would require \$250 billion in new taxes. Given our increasing public debt, passage of a tax increase of this magnitude seems very unlikely.

Implementation of a national health plan would require a very large bureaucracy. Many fear that a national health plan could result in rationing of health care. Such legislation could expect the vigorous opposition of the medical insurance lobby and provider groups such as the AMA. It is the view of the AMA¹⁰ that most Americans are satisfied with their physicians and the health care services they receive.

If we are able to modify our current pluralistic health care program such that all Americans have basic health care insurance, we still face two critical problems. First, we must be certain that in addition to being insured, all Americans have access to all medically needed health care and that it be quality care. Concerns for cost may lead to a "basic package" that excludes some medical care that is medically necessary. Oregon's plan¹¹ to prioritize health services, and then to cover only those conditions whose costs can be met by available resources, is *de facto* rationing. It is unlikely that this approach to define a basic medical insurance package would be acceptable to the American people. A "basic package" must cover all medically needed care.

Provision of health insurance to all Americans does not guarantee assured access to quality medical care. As Ginzberg and Ostow² note, the ease of access of veterans with preferred eligibility status depends on the location of the nearest Veterans hospital. The accessibility of health care to all Americans will depend on the availability of health care facilities and providers. Due to a maldistribution of physicians, we have at least 2000 underserved areas in the United States.² To assure access, we must address the problem of underserved areas. Federally funded community health centers show great promise and should be expanded.^{2,12} We clearly need additional primary care physicians; our medical schools must address the problem that fewer of our graduates are selecting primary care specialties. Ginzberg and Ostow² recommend that we revive the National Health Service Corps to help provide primary care services in underserved areas. Unless we can provide the necessary manpower to assure access to all Americans, the provision of health insurance policies to all Americans will be a hollow victory.

Second, we must address the critical issue of the cost of ensuring all Americans access to quality medical care. The escalating cost of health care is the primary reason that access to medical care has declined. Unless we ban all medical research, each year we can expect new technology, new procedures, and new medications that will be more

effective than their predecessors, and they will be more expensive! If our current spending of 12% of gross national product on health care is the maximum we can afford, we must determine how to contain health care costs if we are to extend access to the uninsured and the underinsured. We will not be able to afford extended access unless we contain health care costs.

Nearly all of the proposals for insuring the uninsured address the issue of cost containment. Some plans place responsibility with the consumer, some with providers, and others focus on the payers.

Many plans suggest that cost sharing will lead to cost consciousness by consumers. They recommend deductibles and copayments to put the consumer at risk.^{5,6,8,12} Deductibles and coinsurance will have little impact on the sick who have already exceeded their deductible limits.⁹ Countries, including Canada, that have been more successful at cost containment than we do not rely on cost sharing by the consumer.¹³

Others place responsibility for cost containment with the payers. They recommend that they control providers' fees by using the Medicare model of diagnosis related groups and resource-based relative value scales.^{6-8,12,14} Some recommend that payments to providers be capped on the basis of the gross national product.^{3,8,15}

Enthoven and Kronick⁹ emphasize that "managed competition" will allow payers to control costs. Managed competition has had a significant impact on cost containment; however, it presents the risk that quality and access to care may become less important to the provider than the generation of profit.⁵

We believe that the primary responsibility for cost containment should rest with the provider, especially the physician. Meaningful cost containment cannot occur unless we decrease the volume of services.¹² The volume of medical services in the United States can be decreased without resorting to rationing on the basis of age, ability to pay, or payer. Volume can be decreased if we eliminate unnecessary or ineffective procedures. Practice patterns must be based on outcomes.⁹ We need to encourage research aimed at determining what procedures are most likely to benefit which patients under what circumstances. In short, practice guidelines and standards of care must be developed that result in cost-effective treatment. To effect these changes in physicians' behavior will not be easy. Medical schools and residency programs must take the lead in encouraging cost-effective practice patterns early in each physician's career. Granting agencies must support research aimed at assessing the efficacy and defining the indications for various medical procedures. Research will continue to produce new technology with increasing costs. We must determine the efficacy of each new technology and determine specific indications before we approve reimbursement. Since many tests and procedures are performed as defensive medicine, meaningful malpractice reform would lead to an additional reduction in the volume of unnecessary medical services.

A second way to decrease the volume of medical services is to have fewer patients. We can decrease the number of patients requiring increasingly expensive treatment by emphasizing primary prevention and early detection.

Hospitalization for stroke has decreased because of effective treatment of hypertension. Hospitalization for myocardial infarction has decreased because of treatment of hypertension, decreased cigarette smoking, and changes in diet. The decrease in health care costs due to the decrease in just these two diseases is far greater than the savings that might be attributable to consumer cost consciousness. Again, research is needed to determine other methods to prevent disease rather than to deal with disease in its final stages.

A third way to decrease the volume of medical services is to reassess our approach to the terminally ill. It is clear that we are providing expensive, high-technology treatment to many terminally ill patients who do not want these treatments.¹⁶ The widespread use of living wills and/or durable powers of attorney could save millions of dollars by avoiding unwanted expensive treatment of the terminally ill.¹⁷

We believe that the provision of health care insurance to all Americans is not enough. We must ensure access to quality health care to all Americans without regard to their ability to pay. This goal is attainable by modifying our current pluralistic health care system.

Implementation of any of these plans to increase access will require additional expenditures for health care. Therefore, all plans to provide quality care to all Americans will fail unless we control health care costs. Meaningful control of costs will require us to decrease the volume of medical services. The volume of medical services can be significantly decreased by eliminating unnecessary and ineffective procedures. Physicians must lead the way by utilizing practice patterns and standards of care that result in cost-effective treatment.

If we reexamine our priorities, we can ensure that all Americans have access to quality health care.

References

1. Friedman E. The uninsured: from dilemma to crisis. *JAMA*. 1991;265:2491-2495.
2. Ginzberg E, Ostow M. Beyond universal health insurance to effective health care. *JAMA*. 1991;265:2559-2562.
3. Grumbach K, Bodenheimer T, Himmelstein DU, Woolhandler S. Liberal benefits, conservative spending: the physicians for a national health program proposal. *JAMA*. 1991;265:2549-2554.
4. A Flinn Foundation Report. *Health Insurance in Arizona*. Phoenix, Ariz: Flinn Foundation; 1990.
5. Bronow RS, Beltran RA, Cohen SC, Elliott PT, Goldman GM, Spotnitz SG. The Physicians Who Care Plan: preserving quality and equitability in American medicine. *JAMA*. 1991;265:2511-2515.
6. Rockefeller JD. A call for action: the Pepper Commission's blueprint for health care reform. *JAMA*. 1991;265:2507-2510.
7. Kansas Employer Coalition on Health Inc. A framework for reform of the US health care financing and provision system. *JAMA*. 1991;265:2329-2531.
8. Roybal ER. 'The US Health Act': comprehensive reform for a caring America. *JAMA*. 1991;265:2545-2548.
9. Enthoven AC, Kronick R. Universal health insurance through incentives reform. *JAMA*. 1991;265:2532-2536.
10. Todd JS, Seekins SV, Krichbaum JA, Harvey LK. Health access America: strengthening the US health care system. *JAMA*. 1991;265:2503-2506.
11. Klevit HS, Bates AC, Castanares T, Kirk EP, Sipes-Metzler PR, Wopat R. Prioritization of health care services: a progress report by the Oregon Health Services Commission. *Arch Intern Med*. 1991;151:860-862.
12. Nutter DO, Helms CM, Whitcomb ME, Weston WD. Restructuring health care in the United States: a proposal for the 1990s. *JAMA*. 1991;265:2516-2520.
13. Holahan J. An American approach to health system reform. *JAMA*. 1991;265:2537-2540.
14. Davis K. Expanding Medicare and employer plans to achieve universal health insurance. *JAMA*. 1991;265:2525-2528.
15. Fein R. The health security partnership: a federal/state universal insurance and cost containment program. *JAMA*. 1991;265:2555-2558.
16. Cohen-Mansfield J, Rabinovich BA, Lipson S, et al. The decision to execute a durable power of attorney for health care and preferences regarding the utilization of life-sustaining treatments in nursing home residents. *Arch Intern Med*. 1991;151:289-294.
17. Gamble ER, McDonald PJ, Lichstein PR. Knowledge, attitudes, and behavior of elderly persons regarding living wills. *Arch Intern Med*. 1991;151:277-280.

On the Care of the Poor and the Uninsured

Boris M. Astrachan, MD, Donald J. Scherl, MD

Access of the poor to mental health services is varied and in many sections of the nation reflects Medicaid payment policies and the availability of state- and/or county-supported programs. Norquist and Wells¹ demonstrate in this issue of the ARCHIVES that in Los Angeles (Calif), a relatively resource-rich community with fairly extensive state-supported services, those without health insurance may well have less adequate access to mental health care than do poor residents who are eligible for Medicaid, yet the Medicaid-eligible residents and uninsured residents had similar prevalences of serious psychiatric disorders.

The poor tend to be sicker. As Bruce et al² demonstrate, after comparing the low-income population, which is defined in much more precise terms than has been the case in earlier literature, with the general population, previously "healthy" poor people are almost twice as likely to develop mental illnesses over 6 months as their nonpoor counterparts. While this is no surprise, the increasing ability to document in detail the nature of the association between poverty and mental illnesses is critically important if we are to begin to understand the mediating mechanisms that influence the incidence and prevalence of mental illnesses among high-risk populations.

Our experience with chronic mental illnesses over the last two decades provides at least one clear lesson as we contemplate the needs of those who lack access to care for mental illnesses because they are uninsured or poor: while there is much that we do not know and must study at length and in detail, there is much that is known, and that we do not use. More might be done had our society the desire and the will. When President Bush recently said that we are a compassionate people, he was surely correct, but when he said we had "more will than wallet" he had it exactly backward.

We often act as though poverty, dishonesty, and dishonor were synonymous. We want to be sure that the poor merit the care that we provide them and that public support of their care is absolutely necessary. While the advent of Medicaid and Medicare profoundly altered the relationship of the medical profession to the disadvantaged, societal attitudes toward the poor were not dramatically changed. These entitlement programs made it possible for physicians to be paid for services that had formerly been rendered free. The inability of individual patients to pay for care, something physicians believed they had to deal with individually, instead became a matter removed from individuals and assigned to "society," its accountants, and its regulators. And Medicaid, in many states and for many services, reimbursed physicians so poorly that the patient's perception of an entitlement and the physician's sense of being forced to do what one would rather not do conflicted, building

further distrust. In the process, the individual relationship of the practitioner to the patient, and the duty each has to the other, has been changed in ways we only poorly comprehend.

How then are we to alter the present circumstances of these high-risk groups? How can we better serve the poor? As Norquist and Wells¹ explain, we do not yet know clearly whether services provided to Medicaid beneficiaries and heavily used in the authors' study represent an adequate level of care, although we do know from Bruce et al² that the Medicaid-eligible population is likely to have a higher prevalence and severity of illness than the general population. Extending health care insurance to all employed people does not solve the problem, although it might well alleviate part of it, but for the unemployed who are poor and without community-provided care, some other alternative is needed. Norquist and Wells¹ suggest that Medicaid be extended to this population. Some form of guaranteed access to health care is certainly needed. However, we cannot expect changes in health policy alone to change health status and health outcomes. We do not yet fully understand the specific impact of the often crowded, dangerous, and unstable living conditions of many poor persons on the development and treatment of mental and physical illness. It seems obvious that sickness destabilizes an already marginal life. Chronic illness strains the capacity of even caring friends and relatives. It does so to a much greater extent when poverty compounds illness. The poor who are ill have difficulty negotiating multiple service systems. While access to care may be available, it may be difficult to maintain treatment. What is true of the disabling mental illnesses is equally true of chronic physical illnesses.

Our society has maintained a remarkable belief in the capacity of the individual: the individual can surmount difficulty and succeed despite disability. At times, it appears as if the extraordinary dedication of dollars to medical care serves this societal value; fix the illness first and then free the person to triumph over adversity. Unhappily, for far too many, the model does not work. For many disabled, physically dependent, mentally ill, and poor people whose lives are marginal, we need new models.

If we are to provide better care to patients, the development of research and new social models that will help us understand and deal with specific issues involving high levels of chronicity, dependency, and poverty, and the mechanisms that mediate their effects seems as important as our need to better understand neurobiologic mechanisms. Society should have long ago looked beyond its health care practitioners and institutions to deal with the failures of social, welfare, and housing policies. We need to understand that trying to change health policy independent of social policy must inevitably fail our patients and our practices.

References

1. Norquist G, Wells K. Mental health needs of the uninsured. *Arch Gen Psychiatry*. 1991;48:475-478.
2. Bruce ML, Takeuchi DT, Leaf PJ. Poverty and psychiatric status: longitudinal evidence from the New Haven Epidemiologic Catchment Area Study. *Arch Gen Psychiatry*. 1991;48:470-474.

Accepted for publication March 18, 1991.

From the Department of Psychiatry, University of Illinois, Chicago (Dr Astrachan), and the Health Science Center at Brooklyn, State University of New York (Dr Scherl).

Reprinted from the *Archives of General Psychiatry* (1991;148:481).