Chris / Devorah

OFFICE OF DISEASE PREVENTION AND HEALTH PROMOTION

Provides national leadership for improving health.

Office of Disease Prevention and Health Promotion

http://odphp.osophs.dhhs.gov

Web activities supported by ODPHP:

healthfinder®
http://www.healthfinder.gov

Healthy People
2010 http://www.health.gov/healthypeople
2000 http://odphp.osophs.dhhs.gov/pubs/hp2000

National Health Information Center
http://nhic-nt.health.org

Office of the Surgeon General
http://www.surgeongeneral.gov

Environmental Health Policy Committee
http://www.health.gov/environment

Partnerships Conference
http://www.health.gov/partnerships

Public Health Functions Project
http://www.health.gov/phfunctions

Science Panel on Interactive Communication and Health
http://www.scipich.org

U.S. State and Local Government Gateway
Health http://www.health.gov/statelocal
Families http://www.hhs.gov/families

HHS Partner Gateway
http://www.hhs.gov/partner

Office of Disease Prevention and Health Promotion
Office of Public Health and Science
U.S. DEPARTMENT OF HEALTH AND
HUMAN SERVICES
200 Independence Avenue, S.W.
Hubert H. Humphrey Building
Room 738G
Washington, DC 20201
(202) 205-8611
Fax: (202) 205-9478

http://odphp.osophs.dhhs.gov/

Registration Form and Invoice

The last date to pre-register is January 7, 2000.
After this date you must register at the conference
Partnerships for Health in the New Millennium: Launching Healthy People 2010

Complete one form per person • Copy this blank page for additional registrants

Name _____ Degree _____
Title _____
Organization/Company/Agency _____
Mailing Address _____
City _____ State _____ ZIP _____
Telephone _____ Fax _____
E-mail _____ Web site _____

Check Applicable Fees

Non-profit: Government agencies, academic institutions, non-profit organizations • **For-profit:** Commercial companies, for-profit organizations
Fee includes admission to all sessions, functions in the exhibit hall, and fitness activities of the conference.

December 9 – January 7:	Onsite:	Daily:	Students:*
❑ Non-profit: $450	❑ Non-profit: $550	❑ Non-profit: $200/day	❑ Full registration: $125
❑ For-profit: $750	❑ For-profit: $850	❑ For-profit: $300/day	❑ Daily registration: $50/day

---

* Student eligibility: must be enrolled in full-time program. Please provide a letter from the administrative office verifying your full-time status.

❑ Student letter from administrative department attached.

Method of Payment

❑ Enclosed is a check made payable to: *Infinity Conference Group, Inc. Escrow Account*
❑ Federal and State agencies may submit a purchase order with application. Payment is by Purchase Order Number # _____
A copy of the purchase order must accompany your Registration Form

Credit Card No. _____ Exp _____ ❑ MC ❑ VISA ❑ AMEX
Signature _____ Date _____

Return completed form to Partnerships for Health, c/o Infinity Conference Group, 423 Carlisle Drive, Suite A, Herndon, VA 20170.
Fax credit card or purchase order payments to 1-703-925-9453.
Registration will only be confirmed upon receipt of the registration fee along with the form.
Checks and Purchase Orders must have participants names listed. Please use this form as an invoice (*see top of page*).

Refunds

Refund request(s) must be in writing and faxed or postmarked by January 3, 2000. A $25 administrative fee will be assessed. No refunds can be given after January 3, 2000.

Please check the appropriate box(es) for the credit(s) you wish to attain. *Approval for these continuing education credits are pending.*

❑ Category I CHES CECH from the Society for Public Health Education (SOPHE) which has been designated as a provider of Continuing Education Contact Hours by the National Commission for Health Education Credentialing.
❑ Category I Credit toward the Physician's Recognition Award of the American Medical Association from the American College of Preventive Medicine (ACPM). ACPM is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.
❑ AAPA accepts AMA Category I CME credit for the PRA from organizations accredited by ACCME.
❑ Contact Hours from the Maryland Nurses Association which is accredited by the American Nurses' Credentialing Center's Commission on Accreditation.
❑ Continuing Professional Education Credit for Registered Dietitians and Dietetic Technicians, Registered from the Commission on Dietetic Registration.
❑ Continuing Education Units (CEUs) from the American School Food Service Association.

Accommodations for Persons with Disabilities

Will you need a sign language interpreter? ❑ Yes ❑ No
If yes, please indicate type needed: ❑ American Sign Language ❑ Signed English ❑ Oral
Please list any other requirements that may require special arrangements. Advance notice of at least seven days prior to the event is required.

_____
_____

FOR OFFICE USE ONLY

Date Received _____ Entered by _____ Date entered _____ Confirmation Letter _____

HEALTHY PEOPLE 2010

www.health.gov/partnerships

SATELLITE BROADCAST AND WEBCAST

January 24-28, 2000

Omni Shoreham Hotel • Washington, DC

Join Secretary Shalala and Surgeon General Satcher in launching the nation's new prevention agenda

Conference Themes

- Partnering for Health Improvements
- Eliminating Health Disparities
- Increasing Quality and Years of Healthy Life
- Harnessing Technology for Health

Earn Continuing Education Credits

Partnerships for Health in the New Millennium: Launching Healthy People 2010

HEALTHY PEOPLE

For More Information
www.health.gov/partnerships
1-800-869-1551

Please pass this 359 words article onto your editors for your use in newsletters, magazines, and Web sites:

Healthy People 2010: A Path to the Future

By Surgeon General David Satcher

Ten years from now Americans on the whole should enjoy substantially better health. Guiding the way will be Healthy People 2010, the U.S. Department of Health and Human Services (HHS) initiative being launched on January 25, 2000. Healthy People 2010 defines the nation's health agenda through broad reaching goals. It is a roadmap showing opportunities for improvements in health that is grounded in science, built through public consensus and, designed to measure progress.

Joining me at the launch will be Secretary Donna Shalala, former Secretary Louis Sullivan, former Surgeon General and Assistant Secretary for Health Julius Richmond, many former Assistant Secretaries, and other leaders and representatives of the more than 350 organizations of the Healthy People Consortium.

HHS Secretary Donna E. Shalala describes Healthy People as an initiative that "Identifies the most significant opportunities to improve the health of the nation and to focus public and private sector efforts on those areas."

The launch of Healthy People 2010 will take place at the Partnerships for Health in the New Millenium conference at the Omni Shoreham Hotel in Washington, DC (information available at www.health.gov/partnerships or call 1-800-869-1551). The conference will also host the release of "Leading Health Indicators," a subset of objectives that define key health issues that can motivate action and exert positive influences over health outcomes. They will become basic building blocks for community health initiatives and help monitor health improvements by targeting behaviors.

The experience and expertise of so many in the medical and health professions have helped us cross the finish line with an excellent national prevention agenda for the next decade. It is indeed rewarding to think how far the health of the nation has improved since the first Healthy People initiative was launched 20 years ago. But, many challenges remain and they form the foundation of Healthy People 2010. Improving the health of the Nation is a long-term investment requiring the participation of all, including the leaders and members of **(EDITOR: INSERT YOUR ORGANIZATION'S NAME HERE IF YOU ARE MEMBER OF THE HEALTHY PEOPLE CONSORTIUM)**. Together, through the goals of Healthy People 2010, we can forge solutions to the challenges of the new era.

# # #

HEALTHY PEOPLE 2010 VIEWING the national conference

Help launch the nation's public health goals—and find out how to achieve them in YOUR community—even if you can't come to Washington!

The Event

Healthy People 2010—which will announce the nation's health goals for the next decade—will be launched at the national conference, *Partnerships for Health in the New Millennium: Launching Healthy People 2010.* Major sessions of this conference will be broadcast on the Internet and via satellite.

How You Can Tune In

To bring this vital information to you, the U.S. Department of Health and Human Services will be broadcasting major sessions:

- On the Web via http://videocast.nih.gov
- Via satellite (for specifications, check http://www.health.gov/partnerships/)

Featured Programming

(Subject to change; ***ADDITIONAL SESSIONS WILL BE BROADCAST.*** *Check Web site for updates.)*

TUESDAY, Jan. 25

- **8:30-10:15 a.m. ET: Welcoming Remarks and Launch of Healthy People 2010.** Learn the history and purpose of Healthy People. Features HHS Secretary Donna Shalala, Surgeon General David Satcher, and others.
- **10:30 a.m.-Noon ET: Congressional Initiatives to Improve Health.** Key Senators and Representatives discuss Congressional health initiatives.
- **Noon-3:15 p.m. ET: Rebroadcast of morning sessions.**

WEDNESDAY, Jan. 26

- **3:30-5 p.m. ET: Translating Healthy People to State and Community Action.** How to take the Healthy People 2010 goals and design a plan for achieving them in your community.

THURSDAY, Jan. 27

- **10:30 a.m.-Noon ET: Eliminating Health Disparities.** Approaches to identifying and eliminating health disparities.
- **1:30-3 p.m. ET: Using a Community Agenda to Mobilize Action on Healthy People 2010 Objectives.** Experts discuss how we can mobilize community resources to improve health.

FRIDAY, Jan. 28

- **10:30 a.m.-Noon ET: Health and Information Technology: The Road Ahead.** How the explosive developments in information and communications technology can be used to improve health and health-related information.
- **1:30-3 p.m. ET: Healthy People in a Healthy World.** A global view of health.

Go to http://www.health.gov/partnerships/ for the latest on the broadcast schedule, downlink information, and continuing education credits.

HHS NEWS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

FOR IMMEDIATE RELEASE
Friday, Dec. 17, 1999

Contact: Damon Thompson
(202) 205-1842

NEW NATIONAL HEALTH GOALS TO BE RELEASED

Healthy People Initiative Sets Agenda for New Century

HHS Secretary Donna E. Shalala and Assistant Secretary for Health and Surgeon General David A. Satcher will release the Healthy People 2010 initiative at the HHS-sponsored Partnerships for Health in the New Millennium conference at the Omni Shoreham Hotel in Washington, D.C., from January 24–28, 2000. Healthy People 2010 contains broad-reaching national health goals for the first decade of the new century.

"Healthy People is a simple yet powerful idea," Secretary Shalala said. "It is a roadmap to better health that provides diverse groups with the knowledge they need to work together to improve the health of all Americans."

"The Healthy People agenda forecasts what can be achieved through lifestyle improvements and good preventive care," said Dr. Satcher. "With the launch of Healthy People 2010, we will celebrate the progress of the nation with a new health agenda for a new era."

Since its inception in 1979, Healthy People has moved the nation from assessing health status to projecting and forecasting what is possible to achieve through preventive interventions and proven clinical preventive services. The initiative provides a time capsule snapshot of the progress of the health of the nation in the last part of the century. Healthy People has enjoyed the bipartisan support of four administrations. Many former and current HHS assistant secretaries, along with other high-ranking government officials, will be participating in the launch.

Healthy People 2010, the third set of decade-long goals, addresses the scenarios and trends of the upcoming decade, including a larger, more diverse, aging population and a host of new health risks such as emerging infectious diseases. The initiative also calls for a refocusing of health policies and expenditures on the long-term investment for a lifetime of good health.

The January 24–28 conference is a joint meeting of the Healthy People Consortium and the Partnerships for Networked Consumer Health Information and is expected to draw a wide audience of public and private sector participants. It will focus on four themes: Partnering for Health Improvements; Eliminating Health Disparities; Increasing Quality and Years of Healthy Life; and Harnessing Technology for Health. Dr. Satcher will give the keynote address for the closing session, A Healthy Charge to the Nation.

- More -

Healthy People originated with a 1979 report by the U.S. Surgeon General that established five life-stage targets to be achieved over a 10-year period. Currently, most states and many localities use the Healthy People framework to guide local health policies and programs. Many will be releasing their own adapted versions of Healthy People 2010 throughout the coming years. Healthy People 2010 is the result of a broad consultation process, including unprecedented public response—over 11,000 comments on the draft document were received. The Healthy People Consortium is a public-private alliance of over 350 national organizations and 270 state agencies that help guide the initiative.

Partnerships for Networked Consumer Health Information examines the ever-expanding role of technology in promoting health and preventing disease. Sponsored by HHS, it brings together the public and private sector to promote development of interactive telecommunication and computer technologies that help consumers take greater responsibility for their health. At the conference, the unique Partnerships Technology Games will showcase cutting-edge applications and Web sites, offering $5000 in prizes for innovation and excellence.

Conference sponsors include the HHS Office of Public Health and Science and many other HHS agencies. Non-federal sponsors include the Academy for Educational Development, the Annenberg Public Policy Center of the University of Pennsylvania and the Annenberg School for Communication for the Technology Games and Showcase.

###

For Partnerships for Health in the New Millennium conference registration information, call 1-800-869-1551, email partnerships@health.org, or go to *http://www.health.gov/partnerships*.

Note: For other HHS Press Releases and Fact Sheets pertaining to the subject of this announcement, please visit our Press Release and Fact Sheet search engine at: *http://www.hhs.gov/news/press/*.

HEALTHY PEOPLE 2010
Healthy People in Healthy Communities

What is Healthy People 2010?
Healthy People 2010 is the prevention agenda for the Nation. It is a statement of national health objectives, designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. Healthy People 2010 offers a simple but powerful idea: provide the objectives in a format that enables diverse groups to combine their efforts and work as a team. It is a road map to better health for all and can be used by many different people, States, communities, professional organizations, and groups to improve health.

Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, ***Healthy People,*** and ***Healthy People 2000: National Health Promotion and Disease Prevention Objectives*** both established national health objectives and served as the basis for the development of State and community plans. Like its predecessors, Healthy People 2010 was developed through a broad consultation process, built upon the best scientific information and designed to measure programs over time.

Development of Healthy People 2010 Objectives
The 28 focus areas of Healthy People 2010 have been developed by lead Federal agencies with the most relevant scientific expertise. The development process was informed by the Healthy People Consortium–an alliance of more than 350 national membership organizations and 250 State health, mental health, substance abuse, and environmental agencies. Additionally, through a series of regional and national meetings and an interactive Web site more than 11,000 public comments on the draft objectives were received. Public comments are posted at www.health.gov/healthypeople for people to use in their own health improvement efforts. The Secretary's Council on National Health Promotion and Disease Prevention Objectives for 2010 also provided leadership and advice in the development of national health objectives.

State and Community Health Objectives
Nearly all States, the District of Columbia, and Guam have developed their own Healthy People plans. Most States have built on national objectives, but virtually all have tailored them to their specific needs. A 1993 National Association of County and City Health Officials survey showed that 70 percent of local health departments used at least some Healthy People 2000 objectives. Many States, working with community coalitions, are now developing their own versions of Healthy People 2010. The ***Healthy People 2010 Toolkit,*** which provides examples of State and national experiences in setting and using objectives, is available on the Web.

Using Healthy People Objectives
Healthy People objectives have been specified by Congress as the measure for assessing the progress of the Indian Health Care Improvement Act, the Maternal and Child Health Block Grant, and the Preventive Health and Health Services Block Grant. Healthy People objectives

have also been used in performance measurement activities, for example, the National Committee on Quality Assurance incorporated many Healthy People targets into its Health Plan Employer Data and Information Set (HEDIS) 3.0, a set of standardized measures for health care purchasers and consumers to use in assessing performance of managed care organizations in the areas of immunizations, mammography screening, and other clinical preventive services.

Individuals, groups, and organizations are encouraged to integrate Healthy People 2010 into current programs, special events, publications, and meetings. Businesses can use the framework, for example, to guide worksite health promotion activities as well as community-based initiatives. Schools, colleges, and civic and faith-based organizations can undertake activities to further the health of all members of their community. Health care providers can encourage their patient to pursue healthier lifestyle and to participate in community-based programs. By selecting from among the national objectives, individuals and organizations can build an agenda for community health improvement and can monitor results over time.

HEALTHY PEOPLE 2010

GOALS: 1. Increase quality and years of healthy life
2. Eliminate health disparities

FOCUS AREAS

Access to Quality Health Services
Arthritis, Osteoporosis, and Chronic Back Conditions
Cancer
Chronic Kidney Disease
Diabetes
Disability and Secondary Conditions
Educational and Community-Based Programs
Environmental Health
Family Planning
Food Safety
Health Communication
Heart Disease and Stroke
HIV
Immunization and Infectious Diseases
Injury and Violence Prevention
Maternal, Infant, and Child Health
Medical Product Safety
Mental Health and Mental Disorders
Nutrition and Overweight
Occupational Safety and Health
Oral Health
Physical Activity and Fitness
Public Health Infrastructure
Respiratory Diseases
Sexually Transmitted Diseases
Substance Abuse
Tobacco Use
Vision and Hearing

The Office of Disease Prevention and Health Promotion (ODPHP), United States Department of Health and Human Services is the Coordinator of the Healthy People 2010 Initiative.

Healthy People 2010
http://www.health.gov/healthypeople

Office of Disease Prevention and Health Promotion
http://odphp.osophs.dhhs.gov

Office of Disease Prevention and Health Promotion, Room 738G, Hubert Humphrey Building, 200 Independence Avenue, SW, Washington, DC 20201, (202) 205-8583

Introductory Volume —
Layout for print in process
1/4/99

Healthy People 2010: Understanding and Improving Health

Healthy People 2010 – Understanding and Improving Health: An Introduction

Healthy People 2010 outlines a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the new millennium.

Like the preceding Healthy People 2000 Initiative – which was driven by an ambitious, yet achievable, 10-year strategy for improving the nation's health by the end of the 20th century – Healthy People 2010 is committed to a single, overarching purpose: improving the nation's health by promoting healthier behaviors and preventing disease.

The History Behind the Healthy People 2010 Initiative

Healthy People 2010 builds on initiatives pursued over the past two decades. In 1979, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* provided national goals for reducing premature deaths and preserving independence for older adults. In 1980, another report, *Promoting Health/Preventing Disease: Objectives for the Nation*, outlined 226 targeted health objectives for the nation to achieve over the next 10 years.

Healthy People 2000: National Health Promotion and Disease Prevention Objectives, released in 1990, identified health improvement goals and objectives to be reached by 2000. The Healthy People 2010 Initiative continues in this tradition as an instrument to improve health for the first decade of the 21st Century.

The Way Healthy People 2010 Goals and Objectives Were Developed

Healthy People 2010 represents the ideas and expertise of a diverse range of individuals and organizations concerned about the nation's health. The Healthy People Consortium – an alliance of 350 national organizations and 250 State public health, mental health, substance abuse, and environmental agencies – conducted three national meetings on the development of Healthy People 2010. In addition, many individuals and organizations gave testimony about health priorities at five Healthy People 2010 regional meetings held in late 1998.

On two occasions – once in 1997 and again in 1998 – the American public was given the opportunity to share its thoughts and ideas. More than 11,000 comments on draft materials were received by mail or via the Internet, including individuals from every State, the District of Columbia, and Puerto Rico. All of the comments received during the development of Healthy People 2010 can be viewed on the Healthy People website: http://www.health.gov/healthypeople.

Healthy People 2010 – Understanding and Improving Health: An Introduction

Healthy People 2010 outlines a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the new millennium.

Like the preceding Healthy People 2000 Initiative – which was driven by an ambitious, yet achievable, 10-year strategy for improving the nation's health by the end of the 20th century – Healthy People 2010 is committed to a single, overarching purpose: improving the nation's health by promoting healthier behaviors and preventing disease.

The History Behind the Healthy People 2010 Initiative

Healthy People 2010 builds on initiatives pursued over the past two decades. In 1979, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* provided national goals for reducing premature deaths and preserving independence for older adults. In 1980, another report, *Promoting Health/Preventing Disease: Objectives for the Nation*, outlined 226 targeted health objectives for the nation to achieve over the next 10 years.

Healthy People 2000: National Health Promotion and Disease Prevention Objectives, released in 1990, identified health improvement goals and objectives to be reached by 2000. The Healthy People 2010 Initiative continues in this tradition as an instrument to improve health for the first decade of the 21st Century.

The Way Healthy People 2010 Goals and Objectives Were Developed

Healthy People 2010 represents the ideas and expertise of a diverse range of individuals and organizations concerned about the nation's health. The Healthy People Consortium – an alliance of 350 national organizations and 250 State public health, mental health, substance abuse, and environmental agencies – conducted three national meetings on the development of Healthy People 2010. In addition, many individuals and organizations gave testimony about health priorities at five Healthy People 2010 regional meetings held in late 1998.

On two occasions – once in 1997 and again in 1998 – the American public was given the opportunity to share its thoughts and ideas. More than 11,000 comments on draft materials were received by mail or via the Internet, including individuals from every State, the District of Columbia, and Puerto Rico. All of the comments received during the development of Healthy People 2010 can be viewed on the Healthy People website: http://www.health.gov/healthypeople.

Healthy People 2010 – Understanding and Improving Health: An Introduction

Healthy People 2010 outlines a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the new millennium.

Like the preceding Healthy People 2000 Initiative – which was driven by an ambitious, yet achievable, 10-year strategy for improving the nation's health by the end of the 20th century – Healthy People 2010 is committed to a single, overarching purpose: improving the nation's health by promoting healthier behaviors and preventing disease.

The History Behind the Healthy People 2010 Initiative

Healthy People 2010 builds on initiatives pursued over the past two decades. In 1979, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* provided national goals for reducing premature deaths and preserving independence for older adults. In 1980, another report, *Promoting Health/Preventing Disease: Objectives for the Nation*, outlined 226 targeted health objectives for the nation to achieve over the next 10 years.

Healthy People 2000: National Health Promotion and Disease Prevention Objectives, released in 1990, identified health improvement goals and objectives to be reached by 2000. The Healthy People 2010 Initiative continues in this tradition as an instrument to improve health for the first decade of the 21st Century.

The Way Healthy People 2010 Goals and Objectives Were Developed

Healthy People 2010 represents the ideas and expertise of a diverse range of individuals and organizations concerned about the nation's health. The Healthy People Consortium – an alliance of 350 national organizations and 250 State public health, mental health, substance abuse, and environmental agencies – conducted three national meetings on the development of Healthy People 2010. In addition, many individuals and organizations gave testimony about health priorities at five Healthy People 2010 regional meetings held in late 1998.

On two occasions – once in 1997 and again in 1998 – the American public was given the opportunity to share its thoughts and ideas. More than 11,000 comments on draft materials were received by mail or via the Internet, including individuals from every State, the District of Columbia, and Puerto Rico. All of the comments received during the development of Healthy People 2010 can be viewed on the Healthy People website: http://www.health.gov/healthypeople.

Healthy People 2010 – Understanding and Improving Health: An Introduction

Healthy People 2010 outlines a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the new millennium.

Like the preceding Healthy People 2000 Initiative – which was driven by an ambitious, yet achievable, 10-year strategy for improving the nation's health by the end of the 20th century – Healthy People 2010 is committed to a single, overarching purpose: improving the nation's health by promoting healthier behaviors and preventing disease.

The History Behind the Healthy People 2010 Initiative

Healthy People 2010 builds on initiatives pursued over the past two decades. In 1979, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* provided national goals for reducing premature deaths and preserving independence for older adults. In 1980, another report, *Promoting Health/Preventing Disease: Objectives for the Nation*, outlined 226 targeted health objectives for the nation to achieve over the next 10 years.

Healthy People 2000: National Health Promotion and Disease Prevention Objectives, released in 1990, identified health improvement goals and objectives to be reached by 2000. The Healthy People 2010 Initiative continues in this tradition as an instrument to improve health for the first decade of the 21st Century.

The Way Healthy People 2010 Goals and Objectives Were Developed

Healthy People 2010 represents the ideas and expertise of a diverse range of individuals and organizations concerned about the nation's health. The Healthy People Consortium – an alliance of 350 national organizations and 250 State public health, mental health, substance abuse, and environmental agencies – conducted three national meetings on the development of Healthy People 2010. In addition, many individuals and organizations gave testimony about health priorities at five Healthy People 2010 regional meetings held in late 1998.

On two occasions – once in 1997 and again in 1998 – the American public was given the opportunity to share its thoughts and ideas. More than 11,000 comments on draft materials were received by mail or via the Internet, including individuals from every State, the District of Columbia, and Puerto Rico. All of the comments received during the development of Healthy People 2010 can be viewed on the Healthy People website: http://www.health.gov/healthypeople.

The final Healthy People 2010 objectives were developed by HHS Secretary Donna Shalala with the input of current U.S. Surgeon General David Satcher, M.D., and former HHS Assistant Secretaries for Health.

The Central Goals of Healthy People 2010

Healthy People 2010 is designed to achieve two overarching goals:

- Increase quality and years of healthy life; and
- Eliminate health disparities.

These two goals are supported by specific objectives in 28 focus areas, which are listed later in this volume. Each objective was developed with a target to be achieved by the year 2010. A full explanation of the two goals can be found in the next section of this document: *Healthy People 2010: A Systematic Approach to Health Improvement.*

The Relationship Between Individual and Community Health

Over the years, health policymakers have come to realize that individual health is closely linked to community health – the community and environment in which individuals live, work, and play. Likewise, community health is profoundly affected by the collective behaviors, attitudes, and beliefs of everyone who lives in the community.

Indeed, the underlying premise of Healthy People 2010 is that the health of the individual is almost inseparable from the health of the larger community, and the health of every community in every State and territory determines the overall health status of the nation. That is why the theme for Healthy People 2010 is "Healthy People in Healthy Communities."

How Healthy People 2010 Will Improve the Nation's Health

One of the most compelling and encouraging lessons learned from the Healthy People 2000 Initiative is that we, as a nation, can make dramatic progress in improving the nation's health in a brief period of time. For example, during the last decade, we achieved significant reductions in infant mortality. Childhood vaccinations are at the highest levels ever recorded in the United States. Fewer teenagers are becoming parents. Alcohol, tobacco, and illicit drug use is leveling off. Death rates for coronary heart disease and stroke have declined. Significant advances have been made in the diagnosis and treatment of cancer and in reducing unintentional injuries.

But we still have a long way to go. Diabetes and other chronic conditions continue to present a serious obstacle to public health. Violence and abusive behavior continue to ravage homes and communities across the country. Mental disorders continue to go undiagnosed and untreated. Obesity has increased from one-fourth to one-third of the adult population. One-quarter of the U.S. population still engages in no physical activity. And unlike a decade ago, HIV/AIDS disproportionately affects women and communities of color.

The Key Role of Community Partnerships

Community partnerships, particularly when they reach out to non-traditional partners, can be among the most effective tools for improving health in communities.

For the past two decades, Healthy People has been used as a strategic management tool for the Federal government, States, communities, and many other public and private sector partners. Virtually all States, the District of Columbia, and Guam have developed their own Healthy People plans modeled after the national plan. Most states have tailored the national objectives to their specific needs.

Businesses, local governments, and civic, professional and religious organizations have also been inspired by Healthy People to sponsor health fairs, print immunization reminders, set up hotlines, change cafeteria menus, begin community recycling, assess school health education curricula, and myriad other activities.

Everyone Can Help Achieve the Healthy People 2010 Objectives

Addressing these challenges is a shared responsibility that requires the active participation and leadership of the Federal Government, States, local governments, policymakers, health providers, professionals, business executives, educators, community leaders, and the American public itself. Though administrative responsibility for the Healthy People 2010 Initiative rests in the Office of Disease Prevention and Health Promotion in the U.S. Department of Health and Human Services, representatives of all these diverse groups – including the American public – shared their experience, expertise, and ideas in developing the Healthy People 2010 goals and objectives.

Healthy People 2010, however, is just the beginning. The biggest challenges still stand before us, and we all share a role in building a healthier nation.

Regardless of your age, gender, education level, income, race, ethnicity, cultural customs, language, religious beliefs, disability, sexual orientation, geographic location, or occupation, Healthy People 2010 is designed to be a valuable resource in determining how you can participate most effectively in improving the nation's health. Perhaps you will recognize the need to be a more active participant in decisions affecting your own

health, or the health of your children or loved ones. Perhaps you will assume a leadership role in promoting healthier behaviors in your neighborhood or community. Or perhaps you will use your influence and social stature to advocate for and implement policies and programs that can dramatically improve the health of dozens, or hundreds, or thousands, or even millions of people.

Whatever your role, this document is designed to help you determine what you can do – in your home, community, business, or State – to help improve the nation's health.

Other Information is Available About Healthy People 2010

Healthy People 2010: Understanding and Improving Health is the first of three volumes in the Healthy People 2010 series. The second volume, ***Healthy People 2010: Objectives for Improving Health***, contains detailed descriptions of more than 450 objectives to improve health. These objectives are organized by 28 specific areas of focus. Finally, the third volume, ***Healthy People 2010: Data Issues and Operational Definitions***, provides a comprehensive review of the statistical measures that will be used to evaluate our progress.

To receive a copy of the second and third volumes in this series, or for more information about the Healthy People 2010 Initiative, go to http://www.health.gov/healthypeople, or call 800-336-4797.

Healthy People 2010 – Understanding and Improving Health:
A Systematic Approach to Health Improvement

Healthy People 2010 is about improving health – the health of each individual, the health of communities, and the health of the nation. However, the Healthy People 2010 goals and objectives cannot improve the health status of the nation by themselves. Instead, they should be recognized as part of a larger, systematic health improvement model (see Figure 1). **[INSERT MODEL ON OPPOSITE PAGE]**

This systematic health improvement model is composed of four key elements:

- Goals;
- Objectives;
- Determinants of health; and
- Health Status.

Whether this systematic approach is used to improve health on a national level, as in Healthy People 2010, or to organize community action on a particular health issue, such as promoting smoking cessation – the components remain the same. The **goals** should provide a general focus and direction. The goals, in turn, should serve as a guide for developing a set of **objectives** that will actually measure progress within a specified amount of time. The objectives focus on the **determinants of health**, which encompass the combined effects of individual and community physical/social environments and the policies and interventions used to promote health, prevent disease, and ensure access to quality health care. The ultimate measure of success in any health improvement effort is the **health status** of the target population.

Healthy People 2010 is built upon this health improvement model. The next section of this document will highlight how this model can be put into action, using Healthy People 2010 as an example.

Healthy People 2010 Goals

Goal 1: Increase quality and years of healthy life

The first goal of Healthy People 2010 is to help individuals of all ages increase life expectancy *and* improve their quality of life.

Life expectancy is the average number of years people born in a given year are expected to live based on a set of age-specific death rates. At the beginning of the 20th century, life expectancy at birth was 47.3 years. Fortunately, life expectancy has dramatically increased over the past 100 years (see Figure 2). Today, the average life expectancy at birth is nearly 77 years.

Life expectancy for persons at every age group has also increased during the past century. Based on today's age-specific death rates, individuals who are 65 years old would be expected to live an average of 18 more years, for a total of 83 years. Those who are 75 years would be expected to live an average of 11 more years, for a total of 86 years.

Differences in life expectancy between populations, however, suggest a substantial need and opportunity for improvement. At least 15 countries with populations of 1 million or more have life expectancies greater than the United States for both men and women (see Figure 3).

There are substantial differences in life expectancy among different population groups within the United States. For example, women outlive men by an average of six years. White women currently have the greatest life expectancy in the United States. The life expectancy for African-American women has risen to be higher today than that for white men. People from households with an annual income of at least $25,000 live an average of 3 to 7 years longer than people from households with incomes of less than $10,000.

Quality of life is a condition that reflects our general sense of happiness and satisfaction with our lives and environment. General quality of life encompasses all aspects of life – including health, recreation, culture, rights, values, beliefs, aspirations, and the conditions that support a life containing these elements. *Health-related* quality of life reflects a personal sense of physical and mental health, and the ability to react to factors in the physical and social environments. Health-related quality of life is inherently more subjective than life expectancy and therefore can be more difficult to measure. Some tools, however, have been developed to measure health-related quality of life. So-called global assessments, in which a person rates his or her health as "poor," "fair," "good," "very good," or "excellent," can be reliable indicators of a person's perceived health. In 1996, 90 percent of people in the United States reported their health as good, very good, or excellent.

Healthy days is another measure of health-related quality of life that estimates the number of days of poor physical and mental health in the past 30 days. In 1998, 82 percent of adults reported having no days in the past month where poor physical or mental health impaired their usual activities. The proportions of days that are reported "unhealthy" are due more often to mentally unhealthy days for younger adults and physically unhealthy days for older adults.

As with life expectancy, however, various population groups can show dramatic differences in quality of life. For example, people in the lowest income households are five times more likely to report their health as fair or poor than people in the highest income households (see Figure 4). A higher percentage of women report their health as fair or poor compared to men. Adults in rural areas are 36 percent more likely to report their health status as fair or poor than adults in urban areas.

Years of healthy life is a combined measure developed for the Healthy People Initiative. The difference between life expectancy and years of healthy life reflects the average amount of time spent in less than optimal health due to chronic or acute limitations. After decreasing in the early 1990s, years of healthy life increased to a level in 1996 that was only slightly above that at the beginning of the decade (64.0 years in 1990 to 64.2 years in 1996). During the same period, life expectancy increased a full year. Health-related quality of life is an important aspect on which Healthy People 2010 will focus.

Achieving a longer and healthier life – the Healthy People perspective

Healthy People 2010 seeks to increase life expectancy and quality of life over the next 10 years by helping individuals gain the knowledge, motivation, and opportunity they need to make informed decisions about their health. At the same time, Healthy People 2010 encourages local and State leaders to promote community- and State-wide efforts to create an environment that promotes healthy behaviors and increases access to high-quality care. Given the fact that individual and community health are virtually inseparable, it is critical that both the individual and the community do their part to increase life expectancy and improve quality of life.

Goal 2: Eliminate health disparities

The second goal of Healthy People 2010 is to eliminate health disparities among different segments of the population. These include differences that occur by gender, race or ethnicity, education or income, disability, living in rural localities, or sexual orientation. The next section of this document highlights ways in which health disparities can occur among various demographic groups in American society.

Gender. While some differences in health between men and women are due to biological differences, others are more complicated and require greater attention and scientific exploration. Some health differences are obviously gender-specific, such as cervical and prostate cancers. Others are less obvious, but may have biological causes.

Overall, men have a life expectancy that is six years less than women and have higher death rates for each of the 10 leading causes of death. For example, men are two times more likely than women to die from unintentional injuries and four times more likely than women to die from firearm-related injuries. Although overall death rates for women may currently be lower than for men, women have shown increased death rates over the last decade in areas where men have experienced improvements, such as lung cancer. Women are also at greater risk for Alzheimer's disease than men and two times more likely than men to be affected by major depression.

Race and ethnicity. Current information about the biologic and genetic characteristics of African Americans, Hispanics, American Indians, Alaska Natives, Asians, Native Hawaiians, and Pacific Islanders does not explain the health disparities experienced by

these groups compared to the white, non-Hispanic population in the United States. These disparities are believed to be the result of the complex interaction among genetic variations, environmental factors, and specific health behaviors.

Even though the nation's infant mortality rate is down, the infant death rate among African Americans is more than double that of whites. Heart disease death rates are more than 40 percent higher for African Americans than for whites. The overall death rate for cancer is 30 percent higher for African Americans than for whites; for prostate cancer, it is more than double that of whites. Higher death rates from breast cancer occur among African American women despite having mammography screening rates higher than that for white women. The death rates from HIV/AIDS for African Americans are over seven times those of whites; rates of homicide are six times those of whites.

Hispanics living in the United States are almost twice as likely to die from diabetes than non-Hispanic whites. While only 11 percent of the total population in 1996, Hispanics accounted for 20 percent of the new cases of tuberculosis. Hispanics also have higher rates of high blood pressure and obesity than non-Hispanic whites. There are differences among Hispanic populations as well. For example, whereas the rate of low birth weight infants is lower for the total Hispanic population compared to whites, Puerto Ricans have low birth weight rates that are 50 percent higher than whites.

American Indians and Alaska Natives have an infant death rate almost double that of whites. The rate of diabetes for this population group is more than twice that of whites. The Pima of Arizona have one of the highest rates of diabetes in the world. American Indians and Alaska Natives also have disproportionately high death rates from unintentional injuries and suicide.

Asians and Pacific Islanders, on average, have indicators of being one of the healthiest population groups in the United States. However, there is great diversity within this population group, and health disparities for some specific groups are quite marked. Women of Vietnamese origin, for example, suffer from cervical cancer at nearly five times the rate of the white women. New cases of hepatitis and tuberculosis are also much higher in Asian and Pacific Islanders living in the United States than whites.

Income and Education. Inequalities in income and education underlie many health disparities in the United States. In general, population groups that suffer the worst health status are also those that have the highest poverty rates and least education. Disparities in income and education levels are associated with differences in the occurrence of illness and death, including heart disease, diabetes, obesity, elevated blood lead level, and low birth weight. Higher incomes can increase access to medical care, enable one to afford better housing and live in safer neighborhoods, and increase the opportunity to engage in health-promoting behaviors.

Income inequality in the United States has increased over the last three decades. There are distinct demographic differences in poverty by age, race, ethnicity, and household

composition (see Figure 5), as well as geographical variations in poverty across the United States. Recent health gains for the U.S. population as a whole appear to reflect achievements among the higher socioeconomic groups, while lower socioeconomic groups continue to lag behind.

Overall, those with higher incomes or more years of education tend to fare better than those with lower incomes or fewer years of education. For example, among white men at age 65, those in the highest income families could expect to live over three years longer than those in the lowest income families. The percent of people in the lowest income families reporting limitation in activity due to chronic disease is three times that of people in the highest income families.

The average level of education in the U.S. population has steadily increased over the past several decades – an important achievement given that more years of education usually translate into more years of life. For women, the amount of education achieved is a key determinant of the welfare and survival of their children. Higher levels of education may also increase the likelihood of obtaining health-related information needed to develop health-promoting behaviors and beliefs in prevention.

But again, educational attainment differs by age, race and ethnicity (Figure 6). Among people 25-64 years of age in the United States, the overall death rate for those with less than 12 years of education is more than twice that of people with 13 or more years of education. The infant mortality rate is almost double for infants of mothers with less than 12 years of education when compared to those with an education of 13 or more years.

Disability. People with disabilities are commonly identified as regular users of assistance programs and having an activity limitation. In 1994, 54 million people in the United States, or roughly 21 percent of the population, had some level of disability. While rates of disability are relatively stable or falling slightly for people over age 45, rates are on the rise among the younger population. While there is wide variation among people with disabilities, they tend to report more days of depression, anxiety, pain, sleeplessness, and fewer days of vitality than people without activity limitations. People with disabilities also have other disparities, including lower rates of physical activity and higher rates of obesity. Many people with disabilities lack access to health services and medical care.

Rural localities. Twenty-five percent of Americans live in rural areas, that is, places with fewer that 2500 residents. Injury-related death rates are 40 percent higher in rural populations than in urban populations. Heart disease, cancer and diabetes rates exceed those for urban areas. Rural populations are less likely to use preventive screening services, exercise regularly, or wear seat belts. In 1996, 20 percent of the rural population was uninsured compared to 16 percent of the urban population. Timely access to emergency services and the availability of specialty care are other issues for this population group.

Sexual orientation. America's gay and lesbian population comprises a diverse community with disparate health concerns. Major health issues for gay men are HIV/AIDS and other sexually transmissible diseases, substance abuse, depression, and suicide. Gay male adolescents are two to three times more likely than their peers to attempt suicide. Lesbians may have higher rates of smoking, obesity, alcohol abuse, and stress than heterosexual women. The issues surrounding personal, family, and social acceptance of sexual preference may place a significant burden on mental health and personal safety.

Achieving Equity – The Healthy People Perspective

While the diversity of the American population may be one of our nation's greatest assets, diversity also presents a range of health improvement challenges – challenges that must be addressed by the individual, the community and State in which he or she lives, and the nation as a whole.

Healthy People 2010 recognizes that communities, States, and national organizations will need to take a multi-disciplinary approach to achieving health equity that involves improving health, education, housing, labor, justice, transportation, agriculture, and the environment. However, our greatest opportunities for reducing health disparities are in empowering individuals to make informed health care decisions and promoting community-wide safety, education, and access to care.

Healthy People 2010 is firmly dedicated to the principle that – regardless of age, gender, race, ethnicity, income, education, geographic location, disability, and sexual orientation – every person in every community across the nation deserves equal access to comprehensive, culturally competent, community-based health care systems that are committed to serving both the needs of the individual and promoting community health.

Objectives

The nation's progress in achieving the two goals of Healthy People 2010 will be monitored through over 450 objectives in 28 focus areas (see Figure 7). Many objectives focus on interventions designed to reduce or eliminate illness, disability, and premature death among individuals and communities. Others focus on broader issues, such as improving access to quality health care, strengthening public health services, and improving the availability and dissemination of health-related information. Each objective has a target for specific improvements to be achieved by the year 2010.

Together, these objectives reflect the depth of scientific knowledge as well as the breadth of diversity in the nation's communities. More importantly, they are designed to help the nation achieve its two overarching goals and to create a nation of healthy people living in healthy communities.

A list of the short titles of all Healthy People 2010 objectives by focus area can be found in Appendix A. In addition, *Healthy People 2010: Objectives for Improving Health* provides an overview of the issues, trends, and opportunities for action in each of the 28 focus areas. This part of Health People 2010 also contains the detailed language of each objective, the rationale behind their focus, the target, and national data tables of their measures.

Figure 7

Healthy People 2010 Focus Areas

Access to Quality Health Services
Arthritis, Osteoporosis, and Chronic Back Conditions
Cancer
Chronic Kidney Disease
Diabetes
Disability and Secondary Conditions
Educational and Community-based Programs
Environmental Health
Family Planning
Food Safety
Health Communication
Heart Disease and Stroke
HIV
Immunization and Infectious Diseases
Injury and Violence Prevention
Maternal, Infant and Child Health
Medical Product Safety
Mental Health and Mental Disorders
Nutrition and Overweight
Occupational Safety and Health
Oral Health
Physical Activity and Fitness
Public Health Infrastructure Respiratory Diseases
Sexually Transmitted Diseases
Substance Abuse
Tobacco Use
Vision and Hearing

Determinants of health

[INSERT DETERMINANTS BOX FROM FRAMEWORK SOMEWHERE IN THIS SECTION]

The breadth and depth of topics covered by the objectives in Healthy People 2010 reflect the array of critical influences that shape the health of individuals and communities.

For example, individual behaviors and environmental factors are responsible for about 70 percent of all premature deaths in the United States. Developing and implementing policies and preventive interventions that effectively address these determinants of health can reduce the burden of illness, enhance quality of life, and increase longevity.

Individual *biology* and *behaviors* influence health through their interaction with each other and with the individual's *social* and *physical environments*. In addition, *policies and interventions* can improve health by targeting factors related to individuals and their environments, including *access to quality health care.*

Biology refers to the individual's genetic make-up (those factors with which he or she is born), family history (which may suggest risk for disease), as well as the physical and mental health problems acquired during life. Aging, diet, physical activity, smoking,

stress, alcohol or drug abuse, injury or violence, or an infectious or toxic agent may result in illness or disability and can produce a "new" biology for the individual.

Behaviors are individual responses or reactions to internal stimuli and external conditions. Behaviors can have a reciprocal relationship to biology; in other words, each can react to the other. For example, smoking (behavior) can alter the cells in the lung and result in shortness of breath, emphysema or cancer (biology) that may then lead individual to stop smoking (behavior). Similarly, a family history that includes heart disease (biology) may motivate an individual to develop good eating habits, avoid tobacco, and maintain an active lifestyle (behaviors), which may prevent his or her own development of heart disease (biology).

Personal choices and the social and physical environments surrounding the individual can shape behaviors. The social and physical environments include all factors that affect the life of the individuals, positively or negatively, and may not be under their immediate or direct control.

The **social environment** includes interactions with family, friends, co-workers, and others in the community. It also encompasses social institutions, such as law enforcement, the workplace, places of worship, and schools. Housing, public transportation, and the presence or absence of violence in the community are among other components of the social environment. While social environments of individuals and communities are unique because of cultural customs, language, and personal, religious, or spiritual beliefs, the social environment also has a profound effect on individual health, as well as the health of the larger community. At the same time, individuals and their behavior contribute to the quality of the social environment.

The **physical environment** can be thought of as that which can be seen, touched, heard, smelled, and tasted. While the physical environment may possess the power to harm individual and community health – such as when individuals and communities are exposed to toxic substances, irritants, infectious agents, and physical hazards in homes, schools, and worksheets – the physical environment may also promote good health, such as providing places for people to exercise and play, or ensuring that streets and sidewalks are in good repair.

Policies and interventions can have a powerful and positive effect on the health of the individual and the community. Examples include health promotion campaigns to prevent smoking; policies mandating child restraints and seat belt use in automobiles; disease prevention services, such as immunizations of children, adolescents, and adult; and clinical services, such as enhancing mental health care for people living with HIV/AIDS. Policies and interventions that promote individual and community health may be implemented by a variety of agencies – such as transportation, education, energy, housing, labor, recreation, and other venues – or through places of worship, community-based organizations, civic groups, and businesses.

The health of individuals and communities depends greatly on **access to quality health care**. Expanding access to quality health care is important to eliminate health disparities and increase the quality and years of healthy life for all people living in the United States. Health care in the broadest sense not only includes that which is received through health care providers, but also extends to health information and services received through other venues in the community.

The determinants of health – individual biology and behavior, the physical and social environments, policies and interventions, and access to quality health care – have a profound effect on the health of individuals, communities, and the Nation. An understanding of any issue affecting health should include an examination of each of these determinants as strategies evolve to improve health.

While both individuals and communities may struggle with the challenge of understanding the dynamic relationships between and among the determinants of health, one fact is clear: Our understanding of these determinants and how they related to one another, coupled with our understanding of how individual and community health predetermines the overall health of the nation, is perhaps the most important key to achieving our Healthy People 2010 goals of increasing both the quality and years of life, and eliminating the nation's health disparities.

Health Status

To completely understand the health of a population, it is essential to monitor and evaluate the results or consequences of the determinants of health.

Health status refers to any number of descriptors pertaining to the health of an individual, community, or nation. The information used to report health status comes from a variety of sources, including birth and death records, hospital discharge data, and health information collected from health care records, personal interviews, physical examinations, or by telephone surveys.

There are numerous measures of health status available at the national, State, and local level. These include trends in birth and death rates, life expectancy, quality of life, morbidity from specific diseases, risk factors, use of ambulatory care and inpatient care, accessibility of health personnel and facilities, financing of health care, health insurance coverage, and many others. These measures are monitored on an annual basis in the United States and reported in a variety of publications, including *Health, United States* and *Healthy People Reviews.*

The leading causes of death are frequently used to describe the health status of the Nation. The Nation has seen a great deal of change over the last 100 years in the leading causes of death (see Figure 8). At the beginning of the 1900s, infectious diseases ran rampant in the United States and worldwide and topped the leading causes of death. A century later,

with the control of many infectious agents and the increasing age of the population, chronic diseases top the list.

A very different picture emerges when the leading causes of death are viewed for various age groups (Figure 9). Unintentional injuries, mainly motor vehicle crashes, are the 5th leading cause of death for the total population, but the leading cause of death for people 1 to 44 years of age. Similarly, HIV/AIDS is the 14th leading cause of death for the total population but the leading cause of death for African American men 25 to 44 years of age.

The leading causes of death in the United States generally result from a mix of behaviors; injury, violence, and other factors in the environment; and the unavailability or inaccessibility of quality health services. Understanding and monitoring behaviors, environmental factors, and community health systems may prove more useful to monitoring the nation's true health, and driving health improvement activities, than mere death rates. This approach has served as the basis for developing the Leading Health Indicators.

Healthy People 2010 – Understanding and Improving Health
The Leading Health Indicators

The Leading Health Indicators are ten areas of major public health concern in the United States. The process of selecting the Leading Health Indicators was as collaborative and extensive as the rest of Healthy People 2010 development (see Box 5). The final set of Leading Health Indicators was chosen based on their ability to drive action, the availability of data to measure progress at the federal and state levels, and because they reflect a broad cross-section of issues of public health importance.

The Leading Health Indicators illuminate individual behaviors, environmental and social factors, and important health system issues that greatly impact on the health of individuals and communities. The underlying influence of income and education on each of these indicators must not be overlooked (see *income and education*, pages x-x).

For each of the 10 Leading Health Indicators, specific objectives derived from Healthy People 2010 will be used to track progress. This small set of measures is only a snapshot of the health of the nation and distills the full set of more than 450 measures for targeted health improvement contained in *Healthy People 2010: Objectives for Improving Health.* The Leading Health Indicators can serve as a link to the other objectives in *Healthy People 2010* and can become the basic building blocks for community health initiatives.

The Leading Health Indicators were designed to help the public more easily understand the importance of health promotion and disease prevention and will encourage their participation in improving health in the next decade. By tracking and communicating progress on the indicators through national and state-level report cards, it will be possible to spotlight both achievements and challenges toward understanding and improving the health of all people living in the United States. Most of the Leading Health Indicators already have data available at the state level; plans are underway to develop local data sources for these indicators over the next decade.

-Developing strategies and action plans to address one or more of these indicators can have a profound effect on increasing the quality and years of healthy life and eliminating health disparities—creating *healthy people in healthy communities*.

A description of each of the Leading Health Indicators follows.

HP2010 logo

Leading Health Indicator: Physical Activity

Regular physical activity throughout life is important for maintaining a healthy body, enhancing psychological wellbeing, and preventing premature death.

In 1997, 64 percent of adolescents in grades 9 through 12 engaged in the recommended amount of physical activity (three or more days per week of vigorous activity for at least 20 minutes each session).

In the same year, only 15 percent of adults performed the recommended amount of physical activity (30 minutes of moderate activity five or more times per week) and 40 percent of adults engaged in no leisure-time physical activity.

The objectives selected to measure progress among adolescents and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the physical activity and fitness objectives included in Healthy People 2010.

Graph of physical activity for adults and 9th-12th graders

Health Impact of Physical Activity

Regular physical activity is associated with lower death rates for adults of any age, even when only moderate levels of physical activity are performed. Regular physical activity decreases the risk of death from heart disease, lowers the risk of developing diabetes, and is associated with a decreased risk of colon cancer. Regular physical activity helps prevent high blood pressure and helps reduce blood pressure in persons with elevated levels.

Regular physical activity also:

- Increases muscle and bone strength.
- Increases lean muscle and helps in decreasing body fat.
- Aids weight control and is a key part of any weight loss effort.
- Enhances psychological well-being and may even reduce the risk of developing depression.
- Appears to reduce symptoms of depression and anxiety, and improve mood.

In addition, children and adolescents need weight-bearing exercise for normal skeletal development and young adults need such exercise to achieve and maintain peak bone mass. Older adults can improve and maintain strength and agility with regular physical activity. This can reduce the risk of falling, helping older adults maintain an independent living status. Regular physical activity increases the ability of people with certain chronic, disabling conditions to perform activities of daily living.

Populations With Low Rates of Physical Activity

- Women are less active than men at all ages
- People with lower incomes and less education are typically not as physically active as those with higher incomes and education.
- African Americans and Hispanics are generally less physically active than whites.
- Adults in northeastern and southern States tend to be less active than adults in north central and western States.
- People with disabilities are less physically active than people without disabilities.
- By age 75 years, one in three men and one in two women engage in *no* regular physical activity.

Other Issues

The major barriers most people face when trying to increase physical activity are time, access to convenient facilities, and safe environments in which to be active.

For more information on Healthy People 2010 objectives or to obtain additional information on physical activity and fitness, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Overweight and Obesity

Overweight and obesity are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates. The number of overweight children, adolescents, and adults has risen over the last four decades.

Total costs (medical cost and lost productivity) attributable to obesity alone amounted to an estimated $99 billion in 1995.

In 1988-94, 11 percent of children and adolescents aged 6 to 19 years were overweight or obese. Overweight or obesity is defined as at or above the sex- and age- specific 95th percentile of body mass index (BMI) from the year 2000 NCHS/CDC growth charts (provisional data).

In the same years, 23 percent of adults aged 20 years and older were considered obese. Adults with a BMI of 30 Kg/M^2 or higher are considered obese. Body mass index is weight in kilograms divided by height in meters squared (Weight in kilograms/ height in meters^2). Adults with a BMI of 25 Kg/M^2 or higher are considered overweight. An estimated 107 million adults in the United States are overweight or obese.

The objectives selected to measure progress among children, adolescents and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the nutrition and overweight objectives included in Healthy People 2010.

Graph for children, adolescents, and adults

Health Impact of Overweight and Obesity
Overweight and obesity substantially raise the risk of illness from high blood pressure, high cholesterol, Type 2 diabetes (previously called adult-onset diabetes), heart disease and stroke, gallbladder disease, arthritis, sleep disturbances and problems breathing, and endometrial, breast, prostate, and colon cancers.

Obese individuals may also suffer from social stigmatization, discrimination, and lowered self-esteem.

Populations with High Rates of Overweight and Obesity
The proportion of adolescents from poor households who are overweight is almost twice that of adolescents from middle and high-income households. Overweight is especially prevalent among women with lower incomes and less education. Obesity is more common among African American and Hispanic than white women. Among African Americans, the proportion of women who are obese is 80 percent higher than that for men. This gender difference is also seen among Hispanic women and men, but the percentage of white, non-Hispanic women and men who are obese is about the same.

Reducing Overweight and Obesity
The development of obesity is a complex result of a variety of social, behavioral, cultural, environmental, physiological, and genetic factors. For example, a healthy diet and regular physical activity are both important for maintaining a healthy weight. Once overweight is established in adolescents, it is very likely to remain in adults. For many overweight and obese individuals, substantial change in eating, shopping, exercising, and even social behaviors may be necessary to develop a healthier lifestyle.

Other Important Nutrition Issues
The quality of food consumed in terms of the proportion of calories from fat, protein and carbohydrate sources, the salt, mineral and vitamin content, and the amount of dietary fiber plays a critical role in disease prevention. The Dietary Guidelines for Americans recommend that, to stay healthy, one should eat a variety of foods and choose a diet that is plentiful in grain products, vegetables and fruits, moderate in salt, sodium and sugars, and low in fat, saturated fat and cholesterol.

Nutritional Challenges
While much progress has been made in making nutrition information available and in providing reduced fat foods and other healthful food choices in supermarkets, challenges remain. One challenge is the composition of foods eaten away from home. As much as 40 percent of a family's food budget is spent in restaurants and on carry-out meals. Foods eaten away from home are generally higher in fat, saturated fat, cholesterol and sodium, and lower in fiber and calcium than are foods prepared and eaten at home.

For more information on Healthy People 2010 objectives or to obtain additional information on nutrition and overweight, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Tobacco Use

Cigarette smoking is the single most preventable cause of disease and death in the United States. Smoking results in more deaths each year in the United States than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires – combined.

Tobacco-related deaths number more than 430,000 per year among U.S. adults, representing more than 5 million years of potential life lost. Direct medical costs attributable to smoking total at least $50 billion per year.

In 1997, 36 percent of adolescents in grades 9 through 12 reported smoking at least one cigarette in the past 30 days. In the same year, 24 percent of adults aged 18 years and older reported smoking more than 100 cigarettes in their lifetime and currently smoked on some or all days in the past month.

The objectives selected to measure progress among adolescents and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the tobacco use objectives included in Healthy People 2010.

Graph on adolescent and adult cigarette smoking rates

Health Impact of Cigarette Smoking
Smoking is the major risk factor for heart disease, stroke, lung cancer, and chronic lung diseases – all leading causes of death. Smoking during pregnancy can result in miscarriages, premature delivery, and sudden infant death syndrome. Other health effects of smoking result from injuries and environmental damage caused by fires.

Environmental tobacco smoke increases the risk of heart disease and significant lung conditions in children, especially asthma and bronchitis. Environmental tobacco smoke is responsible for an estimated 3000 lung cancer deaths each year among adult non-smokers.

Trends in Cigarette Smoking
Adolescent. Overall, the percentage of adolescents in grades 9 through 12 who smoked in the past month increased in the 1990s. Every day, an estimated 3000 young persons start smoking. These trends are disturbing because the vast majority of adult smokers tried their first cigarette before age eighteen; over half of adult smokers became daily smokers before this same young age. Almost half of adolescents who continue smoking regularly will eventually die from smoking-related illness.

Adults. Following years of steady decline, rates of smoking among adults appear to have leveled off in the 1990s.

Populations with High Rates of Smoking
Adolescents. Adolescent rates of cigarette smoking have increased in the 1990s among white, African American and Hispanic high school students after several years of declining rates during the 1970s and 1980s. In 1997, 40 percent of white high school students currently smoked cigarettes compared to 34 percent for Hispanics and 23 percent for African Americans. In African Americans in 1997, only 17 percent of high school girls compared to 28 percent of boys currently smoked cigarettes. Rates of smoking cigarettes in white and Hispanic high school girls and boys are not substantially different.

Adults. Overall, American Indians and Alaska Natives, blue-collar workers, and military personnel have the highest rates of smoking in adults. Rates of smoking in Asian Pacific Islander men are over four times higher than women of the same race. Men have only somewhat higher rates of smoking than women within the total U.S. population. Low income adults are about twice as likely to smoke than high-income adults. The percent of people 25 years of age and over and with less than 12 years of education who are current smokers is nearly three times that for persons with 16 or more years of education.

Other Important Tobacco Issues
There is no safe tobacco alternative to cigarettes and no known medical use for tobacco. Spit tobacco (chew) causes cancer of the mouth, inflammation of the gums, and tooth loss. Cigar smoking causes cancer of the mouth, throat, and lungs, and if inhaled on a

regular basis can increase the risk of heart disease and chronic lung problems. Cigar smoke contains the same toxic and carcinogenic compounds found in cigarettes and therefore can be harmful to both smokers and non-smokers as secondhand smoke.

For more information on Healthy People 2010 objectives or to obtain additional information on tobacco use, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo
HP2010 logoHP2010 logo

Leading Health Indicator: Substance Abuse

Alcohol and illicit drug use are associated with many of this country's most serious problems, including violence, injury, and HIV infection. The annual economic costs to the United States from alcohol abuse were estimated to be $167 billion in 1995 and the costs from drug abuse were estimated to be $110 billion. More than half of the estimated costs of drug abuse was associated with drug-related crime. Two-thirds of the costs of alcohol abuse were due to productivity losses resulting from alcohol-related illness and premature deaths.

In 1997, 76.9 percent of adolescents aged 12-17 years reported they did not use alcohol or illicit drugs in the past month. In the same year, 5.8 percent of adults aged 18 years and older reported using illicit drugs in the past month; 16.1 percent reported binge drinking in the past month, defined as consuming five or more drinks on one occasion.

The objectives selected to measure progress among adolescents and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the substance abuse objectives in Healthy People 2010.

Graphic on alcohol and drug-free adolescent, drug abuse in adults, and binge drinking in adults

Health Impact of Substance Abuse

Alcohol and illicit drug use are associated with child and spousal abuse, sexually transmitted diseases including HIV infection, teen pregnancy, school failure, car crashes, escalating health care costs, low worker productivity, and homelessness. Alcohol and illicit drug use can result in substantial disruptions in family, work, and personal life. Alcohol and drug abuse are associated with child and spousal abuse, teen pregnancy, school failure, car crashes, escalating health care costs, low worker productivity, and homelessness. Drug abuse and alcohol abuse result in substantial disruptions in family, work, and personal life.Alcohol and drug abuse are associated with child and spousal abuse, teen pregnancy, school failure, car crashes, escalating health care costs, low worker productivity, and homelessness. Drug abuse and alcohol abuse result in substantial disruptions in family, work, and personal life.

Alcohol abuse alone is associated with motor vehicle crashes, homicides, suicides, and drowning – the leading causes of death among youth. Long term heavy drinking can lead to heart disease, cancer, alcohol-related liver disease, and pancreatitis. Alcohol use in pregnancy is known to cause fetal alcohol syndrome, a leading cause of preventable mental retardation.

Prevalence and Trends of Substance Abuse

Adolescents. Although the trend from 1994 to 1997 has shown some fluctuations, around 77 percent of adolescents aged 12 to 17 years report being both alcohol-free and drug-free in the past month.

Alcohol is the drug most frequently used by adolescents aged 12-17 years. In 1997, 21 percent of adolescents aged 12-17 years reported drinking alcohol in the past month. Use of alcohol in the past month for this age group has remained about 20 percent since 1992. Eight percent of this age group reported binge drinking and three percent were heavy drinkers (five or more drinks on the same occasion on each of five or more days in the past 30 days).

The trend for use of neither alcohol not illicit drugs in the past month showed some fluctuations, but has remained relatively stable from 1994 to 1997. Use of alcohol in the past month for this age group has been stable at about 20 percent since 1992. However, the use of alcohol dropped significantly from 50 percent in 1979 to 21 percent in 1992.The trend for use of neither alcohol not illicit drugs in the past month showed some fluctuations, but has remained relatively stable from 1994 to 1997. Use of alcohol in the past month for this age group has been stable at about 20 percent since 1992. However, the use of alcohol dropped significantly from 50 percent in 1979 to 21 percent in 1992. Data from 1998 show that 9.9 percent of adolescents aged 12-17 years reported using illicit drugs in the past 30 days. This rate is significantly lower than in the previous year, and remains well below the all time high of 16.3 percent in 1979. Current illicit drug use had nearly doubled for 12-13 year olds between 1996 and 1997 but decreased between 1997 and 1998. Youth are experimenting with a variety of illicit drugs including marijuana, cocaine, crack, heroin, acid, inhalants, methamphetamines, misuse of prescription drugs, and other "street" drugs. The younger a person becomes a habitual

user of illicit drugs, the stronger the addiction becomes, and the more difficult it is to stop use.

Adults. The percentage of adults aged 18 years and older who binge drank or used illicit drugs in the past month has not changed significantly from 1994 to 1997. Illicit drug use was significantly higher in 1979, but has been near the present rate of 5.8 percent for the last twenty years. Binge drinking has also remained at the same approximate level of 16 percent for all adults since 1988, with the highest current rate of 32 percent among 18-25 year olds. Men continue to have higher rates of illicit drug use than women and rates of illicit drug use in urban areas are higher than in rural areas.

For more information on Healthy People 2010 objectives or to obtain additional information on substance abuse, go to www.health.gov on the World Wide Web or call 1-800-336-4797.HP2010 Logo

Leading Health Indicator: Responsible Sexual Behavior

Unintended pregnancies and sexually transmitted diseases, including infection with the human immunodeficiency virus that causes AIDS, can result from unprotected sexual behaviors. Abstinence is the only method of complete protection. Condoms, if used correctly and consistently, can help prevent both unintended pregnancy and sexually transmitted diseases.

In 1997, 85 percent of adolescents abstained from sexual intercourse or used condoms if they were sexually active. In the same year, 23 percent of sexually active adults used condoms.

The objectives selected to measures progress among adolescents and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the responsible sexual behavior objectives in Healthy People 2010.

Graph showing adolescent rates of abstinence or condom use if sexually active; condom use in sexually active adults

Trends in Sexual Behavior
Six-year trends show both an increase in abstinence among all youth and an increase in condom use among those young people who are sexually active. Research has clearly shown that the most effective school-based programs are comprehensive ones that include a focus on abstinence *and* condom use. Condom use in sexually active adults has remained steady at around 25 percent.

Unintended Pregnancies. Half of all pregnancies in the United States are unintended – that is, at the time of conception, the pregnancy was not planned or not wanted. Unintended pregnancy rates in the United States have been declining. The rates of unintended pregnancies remain highest among women less than 20 years of age, women over 40 years of age, and poor and African American women. Approximately one million teenagers girls each year in the United States have unintended pregnancies. Nearly half of all unintended pregnancies end in abortion.

The cost to U.S. taxpayers for adolescent pregnancy is estimated between $6 billion and $15 billion a year.

Sexually Transmitted Diseases. Sexually transmitted diseases (STDs) are common in the United States with an estimated 15 million new cases of STDs reported each year. Almost 4 million of the new cases of STDs each year occur in adolescents. Women generally suffer more serious STD complications than men, including pelvic inflammatory disease, ectopic pregnancy, infertility, chronic pelvic pain, and cervical cancer from Human Papilloma Virus. African Americans and Hispanics have higher rates of STDs than whites.

The total costs of the most common STDs and their complications are conservatively estimated at $17 billion annually.

HIV/AIDS. Nearly 700,000 cases of AIDS have been reported in the United States since the HIV/AIDS epidemic began in the 1980s. The latest estimates indicate that 650,000 to 900,000 people in the United States are currently infected with HIV. The lifetime costs of health care associated with HIV infection, in light of recent advances in HIV diagnostic and therapies, are $155,000 or more per person.

About half of all new HIV infections in the United States are among people under age 25, and the majority are infected through sexual behaviors. HIV infection is the leading cause of death for African American men 25-44 years of age. Compelling worldwide evidence indicates that the presence of other STDs increases the likelihood of both transmitting and acquiring HIV infection.

For more information on Healthy People 2010 objectives or to obtain additional information on responsible sexual behavior, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 Logo

Leading Health Indicator: Mental Health

Approximately 20 percent of the U.S. population are affected by mental illness during a given year. No one is immune from mental illness.

Of all mental illnesses, depression is the most common mental disorder. More than 19 million adults in the United States suffer from depression. Major depression is the leading cause of disability in the United States and is the cause of more that two-thirds of suicides each year.

In 1997, only 23 percent of adults who were diagnosed with depression received treatment.

The objective selected to measure progress among adults for this Leading Health Indicator is presented below. This is only an indicator and does not represent all the mental health objectives in *Healthy People 2010.*

Graph of the percentage of adults diagnosed with depression who are receiving treatment

Definition of Mental Health
Mental health is sometimes thought of as simply the absence of a mental illness, but is actually much broader. Mental health is a state of successful mental functioning, resulting in productive activities, fulfilling relationships, and the ability to adapt to change and cope with adversity. Mental health is indispensable to personal well being, family and interpersonal relationships, and contribution to community or society.

Impact of Depression
A person with a depressive disorder is often unable to fulfill the daily responsibilities of being a spouse, partner, or parent. The misunderstanding of mental illness and the associated stigmatization prevent many persons with depression from seeking professional help. Many people will be incapacitated for weeks or months because their depression goes untreated. Depression is also associated with other medical conditions such as heart disease, cancer, and diabetes, as well as anxiety and eating disorders. Depression has also been associated with the abuse of alcohol and other drugs. An estimated 8 million persons 15-54 years of age had coexisting mental and substance abuse disorders within the past year.

The total estimated direct and indirect cost of mental illness in the United States in 1996, was $150 billion. Depression is estimated to have cost $43.7 billion in 1990.

Treatment of Depression
Major depression remains a serious public health problem mainly because people do not seek treatment and continue to suffer needlessly. Depression is treatable. Available medications and psychological treatments, alone or in combination, can help 80 percent of those with depression. With adequate treatment, future episodes of depression can be prevented or reduced in severity. Treatment for depression can enable people to return to satisfactory, functioning lives.

Populations with High Rates of Depression
Serious mental illness clearly affects mental health and can affect children, adolescents, adults, and older Americans of all ethnic and racial groups, both sexes, and at all educational and income levels.

Adults and the elderly have the highest rates of depression. Major depression affects approximately twice as many women as men. Women who are poor, on welfare, less educated, unemployed, and from minority populations are more likely to experience depression. Rates of depression for older persons in nursing homes range from 15 to 25 percent. In addition, depression rates are much higher among older Americans who have co-existing medical conditions. For example, 12 percent of persons hospitalized for problems such as hip fracture or heart disease are diagnosed with depression.

For more information on Healthy People 2010 objectives or to obtain additional information on mental health, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Injury and Violence

More than 400 Americans die each day from injuries due primarily to motor vehicle crashes, firearms, poisonings, suffocation, falls, fires, and drowning. The risk of injury is so great that most persons sustain a significant injury at some time during their lives.

Motor vehicle crashes are the most common cause of serious injury. In 1997, there were 15.8 deaths from motor vehicle crashes per 100,000 population

Because no other crime is measured as accurately and precisely, homicide is a fairly reliable indicator of all violent crime. In 1997, the murder rate in the United States fell to its lowest level in 3 decades, 7.2 homicides per 100,000 population.

The objectives selected to measure progress for this Leading Health Indicator are presented below. These are only indicators and do not represent all the injury and violence prevention objectives in Healthy People 2010.

Graph of motor vehicle crashes and homicide rates.

Impact of Injury and Violence
The cost of injury and violence in the United States is estimated at more than $224 billion per year, an increase of 42 percent over the last decade. These costs include direct medical care and rehabilitation costs as well as productivity losses to the nation's workforce. The total societal cost of motor vehicle crashes alone exceeds $150 billion annually.

Motor vehicle crashes
Motor vehicle crashes are often predictable and preventable. Increased use of seat belts and reductions in driving while intoxicated are the most effective means to reduce the risk of death and serious injury of occupants in motor vehicle crashes.

Death rates associated with motor vehicle-traffic injuries are highest in the aged 15 to 24 years group. In 1996, teenagers accounted for only ten percent of the U.S. population but 15 percent of the deaths from motor vehicle crashes. Those aged 75 years and over had the second highest rate of motor vehicle-related deaths.

Nearly 40 percent of traffic fatalities in 1997 were alcohol-related. In the United States each year there are estimated to be more than 120 million episodes of impaired driving among adults. In 1996, 21 percent of traffic fatalities of children less than aged 14 years involved alcohol; 60 percent of the time it was the driver of the child's car who was impaired.

The highest intoxication rates in fatal crashes in 1995 were recorded for drivers aged 21 to 24 years. Young drivers who have been arrested for driving while impaired are more than four times as likely to die in future alcohol-related crashes.

Homicides. In 1997, a total of 32,436 individuals died from firearm injuries; of this number, 42 percent were homicides. In 1997, homicide was the third leading cause of death for children aged 5-14 years, an increasing trend in childhood violent deaths. In 1996, more than 80 percent of infant homicides were considered to be fatal child abuse.

Many factors that contribute to injuries are also closely associated with violent and abusive behavior such as low income, discrimination, lack of education, and lack of employment opportunities.

Males are most often the victims and the perpetrators of homicides. African Americans are seven times more likely than whites to be murdered. There has been a decline in homicide of intimates (including spouses, partners, boyfriends, and girlfriends) over the past decade, but remain a significant problem.

For more information on Healthy People 2010 objectives or to obtain additional information on injury and violence, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Environmental Quality

An estimated 25 percent of preventable illnesses worldwide can be attributed to poor environmental quality. In the United States, air pollution alone is estimated to be associated with 50,000 premature deaths and an estimated $40 billion to $50 billion in health-related costs annually.

In the U.S., 113 million people live in areas that are designated nonattainment areas for established health-based standards for one or more of six commonly found air pollutants. Nearly all of these individuals are exposed to ozone levels that do not meet these standards.

During the years 1988 to 1994, 65 percent of nonsmokers were exposed to environmental tobacco smoke.

The objectives selected to measure progress among children, adolescents and adults for this leading health indicator are presented below. These are only indicators and do not represent all the environmental quality objectives in Healthy People 2010.

Graph showing Ozone non-attainment areas and second hand smoke exposures.

Defining the Environment
The physical and social environments play major roles in the health of individuals and communities. The physical environment includes the air, water and soil through which exposure to chemical, biological and physical agents may occur. The social environment includes housing, transportation, urban development, land-use, industry and agriculture and results in exposures such as work-related stress, injury and violence.

A Global Concern
Environmental quality is a global concern. Ever-increasing numbers of people and products cross national borders and may transfer health risks such as infectious diseases and chemical hazards. For example, pesticides that are not registered or are restricted for use in the United States potentially could be imported in the fruits, vegetables, and seafood produced abroad and eaten in the United States.

Health Impact of Poor Air Quality
Poor air quality contributes to respiratory illness, cardiovascular disease, and cancer. For example, the overall death rate from asthma increased 52 percent between 1980 and 1993, and for children it increased 67 percent. Asthma can be triggered or worsened by ozone, environmental tobacco smoke, and other chemicals in the air.

Air pollution. There have been dramatic improvements in air quality in the United States over the past three decades. Between 1970 and 1997, total emissions of the six principal air pollutants decreased 31 percent. Still, million of tons of toxic pollutants are released into the air each year from automobiles, industry and other sources. In 1997, despite continued improvements in air quality, approximately 107 million people lived in areas with unhealthy air based on established standards. A disproportionate number of Hispanics and Asian and Pacific Islanders live in areas that failed to meet these standards in 1996 compared to whites, African Americans, and American Indians or Alaska Natives.

Tobacco smoke. Exposure to environmental tobacco smoke, or secondhand smoke, among nonsmokers is widespread. Home and workplace environments are major sources of exposure. It is estimated that 15 million children were exposed to secondhand smoke in their homes in 1996. Environmental tobacco smoke causes heart disease and is responsible for an estimated 3,000 deaths from lung cancer in nonsmoking adults and 150,000 to 300,000 respiratory infections in children each year in the United States.

Improvement in Environmental Quality
In the United States, ensuring clean water, safe food, and effective waste management have contributed greatly to a declining threat from many infectious diseases. Important work must continue in these areas, as well as to improve the air quality and to better understand threats such as chronic, low-level exposures to hazardous substances.

For more information on Healthy People 2010 objectives or to obtain additional information on environmental quality, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Immunization

Immunizations are among the greatest public health achievements of the 20th century. Immunizations can prevent disability and death from infectious diseases for individuals and help control the spread of infections within communities.

In 1998, 73 percent of children received all vaccines recommended for universal administration for at least 5 years.

In 1997, influenza immunization rates were 65 percent in adults aged 65 years or older, almost double the 1989 immunization rate of 33 percent. Less than 30 percent of younger persons who were at high risk for complications from influenza received yearly immunization. In 1997, only 43 percent of persons aged 65 years or older had ever received pneumococcal vaccine.

The objectives selected to measure progress among children and adults for this Leading Health Indicator are presented below. These are only indicators and do not represent all the immunization and infectious diseases objectives in Healthy People 2010.

Graph of Immunizations rates for children and adults

Impact of Immunizations
Many vaccine-preventable diseases that were once common are now controlled. Smallpox has been eradicated, poliomyelitis has been eliminated from the Western Hemisphere, and measles cases in the United States are at a record low.

Immunizations against influenza and pneumococcal disease can prevent serious illness and death. Pneumonia and influenza deaths together comprise the sixth leading cause of death in the United States. Influenza causes an average of 110,000 hospitalizations and 20,000 deaths annually in the United States; pneumococcal disease causes 10,000 to 14,000 deaths annually in the United States.

Recommended Immunizations
As of November 1, 1999, all children born in the United States (11,000 per day) should be receiving 12-16 doses of vaccine by age two to be protected against 10 vaccine-preventable childhood diseases. This recommendation will change in the years ahead as new vaccines are developed, including combinations of current vaccines that may even reduce the number of necessary immunizations.

Recommended immunizations for adults aged 65 years and older include a yearly immunization against influenza (the "flu-shot") and a one time immunization against pneumococcal disease. Most of the deaths and serious illnesses caused by influenza and pneumococcal disease occur in older adults and others at increased risk for complications of these diseases due to other risk factors or medical conditions.

Trends in Immunizations
National coverage levels in children are now greater than 90 percent for each immunization recommended during the first 2 years of life, except for hepatitis B and varicella vaccines. The hepatitis B immunization rate in children was 87 percent in 1998, the highest level ever reported.

In 1996, 69 percent of children aged 19-35 months from the lowest income households received the combined series of recommended immunizations compared with 80 percent of children from higher income households. Among children who are not from low income households, the percent of white children who had received recommended immunizations was slightly higher than that of African American and Hispanic children.

Both influenza and pneumococcal vaccine rates are significantly lower in African American and Hispanic adults than in white adults.

Other Immunization Issues
Coverage levels for immunizations in adults are not as high as those achieved in children, yet the health effects may be just as great. Barriers to adult immunization include not knowing immunizations are needed, misconceptions about vaccines, and lack of recommendations from health care providers.

The economic impact of vaccine-preventable diseases is exemplified by the resurgence of measles in the United States from 1989 to 1991, which resulted in $100 million in direct medical care costs. Cost-savings from routine childhood immunization range from $24 for every dollar spent on DTaP to $2 for the more recently approved Hib vaccine.

For more information on Healthy People 2010 objectives or to obtain additional information on immunization and infectious diseases, go to www.health.gov on the World Wide Web or call 1-800-336-4797.

HP2010 logo

Leading Health Indicator: Access to Health Care

Access and use of clinical preventive services is an important indicator of quality health care. Strong predictors of access to quality health care include having health insurance, a higher income level, and a regular primary care provider or other source of ongoing health care. Early prenatal care can serve as an indicator of access to quality health care services, since prenatal care is more likely to be effective if received during the first trimester.

In 1997, 85 percent of individuals under aged 65 years had health insurance, and 86 percent had a usual source of health care. Also in that year, 83 percent of pregnant women received prenatal care in the first trimester of pregnancy.

The objectives selected to measure progress for this Leading Health Indicator are presented below. These are only indicators and do not represent all the access to quality health care objectives in Healthy People 2010.

Graph of Health Insurance Rates, Ongoing Source of Care, and Prenatal Care in the First Trimester

Health Insurance
Health insurance provides access to health care. Persons with health insurance are more likely to have a primary care provider and to have received appropriate preventive care such as a recent Pap test, immunization, or early prenatal care. Adults with health insurance are twice as likely to receive a routine check-up as adults without health insurance.

An estimated 40 million persons in the United States do not have health insurance, including 11 million uninsured children. Over the last decade, the proportion of persons under aged 65 years with health insurance remained steady at around 84 percent. About one-third of adults under aged 65 years below the poverty level were uninsured. For persons of Hispanic origin, approximately one in every three persons was without health insurance coverage in 1997. Mexican Americans had one of the highest uninsured rates at 38 percent.

Ongoing Sources of Primary Care
More than 40 million Americans do not have a particular doctor's office, clinic, health center, or other place where they would usually go to seek health care or health-related advice. Even among privately insured persons, a significant number lacked a usual source of care or reported difficulty in accessing needed care due to financial constraints or insurance problems.

Adolescents aged 18 to 24 years were the most likely to lack a usual source of ongoing primary care. Only 76 percent of individuals below the poverty level and 74 percent of Hispanics had a usual source of ongoing primary care.

Barriers to Access to Quality Health Care
Financial, structural, and personal barriers can limit access to health care. Financial barriers include not having health insurance, not having enough health insurance to cover needed services, or not having the financial capacity to cover services outside a health plan or insurance program. Structural barriers include the lack of primary care providers, the lack of medical specialists or other health care professionals to meet special needs, or the lack of health care facilities. Personal barriers include cultural or spiritual differences, language barriers, not knowing what to do or when to seek care, or concerns about confidentiality or discrimination.

For more information on Healthy People 2010 objectives or to obtain additional information on access to quality health care, please go to www.health.gov on the World Wide Web or call 1-800-336-4797.

Box 4:

The process of selecting the Leading Health Indicators was lead by an interagency workgroup within the U.S. Department of Health and Human Services. Public comment at national and regional meetings as well as focus groups testing of indicators helped to determine the final set. A report by the Institute of Medicine of the National Academy of Sciences provided several scientific models on which to support the set of indicators.

Box 5:

The ten Leading Health Indicators

Volume I References

Part I: Overview

McGinnis JM, Maiese DR, Defining mission, goals, and objectives, in *Principles of Public Health Practice*, Scutchfield FD and Keck CW, Delmar Publishers, Albany, NY, 1997, pp. 140-1.

Part II: A Systematic Approach to Health Improvement

Goals

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. *Socioeconomic Status and Health Chartbook. Health, United States, 1998.* Hyattsville, Maryland: National Center for Health Statistics. 1998.

Centers for Disease Control and Prevention (CDC). Health-related quality-of-life measures—United States, 1993. MMWR 44:195-200,1995.

Tissue T. Another look at self-rated health among the elderly. J Gerontol (27):91-4. 1972

Idler EL, Benyamini Y. Self-rated health and mortality: A review of twenty-seven community studies. J Health Soc Behav (38):21-37. 1997.

CDC, BRFSS Prevalence Data, 1998, http://www2.cdc.gov/nccdphp/brfss/index.asp.

Luepker RV, Heart disease. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, pp. 939-40.

Barker WH, Prevention of disability in older persons. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, p. 1063.

Hoyert DL, Kochanek KD, Murphy SL. Deaths: Final Data for 1997. *National vital statistics reports*; vol 47 no. 19. Hyattsville, Maryland: National Center for Health Statistics. 1999.

Last JM, The determinants of health. In *Principles of Public Health Practice*, Scutchfield FD and Keck CW, Delmar Publishers, Albany, NY, 1997, p. 33-34.

Syme SL and Balfour JL, Social determinants of disease. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, pp. 800-1.

Frumkin H and Walker ED, Minority workers and communities. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, p. 685.

Institute of Medicine, *Improving Health in the Community*, National Academy Press, Washington, DC, 1997, p. 48-56.

Definitions: Healthy People 2010, Disability and Secondary Conditions Focus Area.

McNeil JM, Americans with disabilities: 1994-95, *Current Population Reports*, August 1997, Bureau of the Census (P70-61), U.S. Department of Commerce, Washington, DC.

CDC. Health-related quality of life and activity limitation—eight states, 1995. *Morbidity and Mortality Weekly Report,* 47(7);134-140, 1998.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99*. Hyattsville, Maryland: Public Health Service. 1999.

LaPlante MP, Rice DP, Cyril J, Health insurance coverage of people with disabilities in the U.S., *Disability Statistics Abstract*, Disability Statistics Rehabilitation, Research and Training Center, San Francisco, CA, September, 1994.

American College of Physicians, Rural Primary Care, *Annals of Internal Medicine*, March 1, 1995, 122(5):380-390.

Pearson TA, Lewis C, Rural epidemiology: insights from a rural population laboratory. *American Journal of Epidemiology*, November 15, 1998, 148(10):949-57.

Braden J, Beauregard K. *Health Status and Access to Care of Rural and Urban Populations*. Agency for Health Care Policy and Research. Rockville, MD: Public Health Service, 1994. (AHCPR Pub. no. 94-0031. National Medical Expenditure Survey Research Findings 18.)

Vistnes JP, Monheit AC. *Health Insurance Status of the Civilian Noninstitutionalized Population.* Rockville, MD: Agency for Health Care Policy and Research, August 1997. (Medical Expenditure Panel Survey (MEPS) Research Findings, Number 1.) AHCPR Pub. No. 97-0030.

Cochran SD, Mays VM. Depressive distress among homosexually active African American men and women. Am J Psychiatry. 1994;151:524-529.

Catalan J, Pugh K. Suicidal behaviour and HIV infection—is there a link? AIDS Care. 1995;7(suppl 2):S117-S121.

Davidson L, Linnoila M, eds. Report of the Secretary's Task Force on Youth Suicide, 2: Risk Factors for Youth Suicide. Washington, DC: US Dept of Health and Human Services, Public Health Service; 1989:89-1623.

Solarz, A, Ed. Lesbian health: current assessment and directions for the future. Institute of Medicine, 1997.

American Medical Association. Council Report. Health care needs of gay men and lesbians in the United States. May 1996, 247:1354-1359.

Determinants of Health

Institute of Medicine, *Improving Health in the Community*, National Academy Press, Washington, DC, 1997, pp. 48-56.

Syme SL and Balfour JL, Social determinants of disease. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, p. 795.

McGinnis JM, Maiese DR, Defining mission, goals, and objectives, in *Principles of Public Health Practice*, Scutchfield FD and Keck CW, Delmar Publishers, Albany, NY, 1997, pp. 136-145.

Health Status

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

Physical Activity

U.S. Department of Health and Human Services. *Physical activity and Health: A Report of the Surgeon General.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.

CDC. Prevalence of sedentary leisure-time behavior among adults in the United States. *Health E-Stats.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Health Statistics, 1999.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99.* Hyattsville, Maryland: Public Health Service. 1999.

Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. *Socioeconomic Status and Health Chartbook. Health, United States, 1998.* Hyattsville, Maryland: National Center for Health Statistics. 1998.

CDC. Physical activity and the prevention of coronary heart disease. *Morbidity and Mortality Weekly Report* 42:669-72, 1993.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

Overweight and Obesity

National Institutes of Health. Statistics related to overweight and obesity. NIH Publication No. 96-4158, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, U.S. Public Health Service, July 1996.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99.* Hyattsville, Maryland: Public Health Service. 1999.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. *Socioeconomic Status and Health Chartbook. Health, United States, 1998.* Hyattsville, Maryland: National Center for Health Statistics. 1998.

Press release. Research News—USDA, Agricultural Research Service. U.S. Department of Agriculture, Washington, DC, November 20, 1996.

Lin, B.H. and Frazao, E. Nutritional Quality of Foods At and Away From Home. *FoodReview* 20(2):33-40, May-August 1997, U.S. Department of Agriculture. Economic Research Service.

U.S. Department of Agriculture/U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. Fourth Edition.* USDA Home and Garden Bulletin No. 232, December 1995.

Wolf AM, Colditz GA, Current estimates of the economic cost of obesity in the United States, *Obesity Research,* 6(2):97-106, 1998.

Tobacco Use

CDC, *Targeting tobacco use: the nation's leading cause of death*, 1999. Atlanta, GA: Centers for Disease Control and Prevention.U.S. Department of Health and Human Services.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

U.S. Environmental Protection Agency (EPA). *Respiratory Health Effects of Passive Smoking: Fact Sheet.* EPA Pub. No. EPA-43-F-93-003. Washington, DC: U.S. Environmental Protection Agency, 1993.

NIH, *Cigars: health effects and trends*, 1998, Bethesda, MD: National Cancer Institute, National Institutes of Health. U.S. Department of Health and Human Services.

CDC. Guidelines for school health programs to prevent tobacco use and addiction. *Morbidity and Mortality Weekly Report,* 1994;43(no. RR-2).

U.S. Department of Health and Human Services. Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smok-ing and Health, 1998.

CDC. Youth Risk Behavior Surveillance—United States, 1997. *Morbidity and Mortality Weekly Report,* 47(SS-3); 1998.

CDC. Smoking-attributable mortality and years of potential life lost—United States, 1984. *Morbidity and Mortality Weekly Report,* 46(20);441-451, 1997.

Substance Abuse

NCADI, *Health care costs, the deficit, & alcohol, tobacco, and other drugs*, National Clearinghouse for Alcohol and Drug Information, Rockville, MD, NCADI Inventory Number ML007, 1995.

SAMHSA, *Summary of findings from the 1998 National Household Survey on Drug Abuse*, Office of Applied Studies, Substance Abuse and Mental Health Services Administration, Rockville, MD, Department of Health And Human Services, 1999.

Harwood H, Fountain D, Livermore G, *The Economic Costs of Alchohol and Drug Abuse in the United States, 1992*. NIH Publication Number 98-4327, National Institutes of Health, Rockville, U.S. Department of Health and Human Services, 1998.

Responsible Sexual Behavior

CDC, *Fact sheet: youth risk behavior trends*, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 1999.

CDC, Young people at risk—epidemic shifts further toward young women and minorities, *CDC Update*, National Center for HIV, TB & STD Prevention, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 1999.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99*. Hyattsville, Maryland: Public Health Service. 1999.

CDC. *PRAMS 1996 Surveillance Report*. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 1999.

CDC. Trends in sexual risk behaviors among high school students—United States, 1991-1997. *Morbidity and Mortality Weekly Report*, 47(36);749-752, 1998.

CDC, *From data to action: CDC's public health surveillance for women, infants and children*. National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 1994.

American Social Health Association. Sexually transmitted diseases in America: how many cases and at what cost? Kaiser Family Foundation, Menlo Park, CA, 1998.

Division of STD Prevention. *Sexually Transmitted Disease Surveillance, 1998.* Department of Health and Human Services, Atlanta: Centers for Disease Control and Prevention (CDC), September 1999.

CDC, *HIV/AIDS surveillance report, midyear edition.* Department of Health and Human Services, Atlanta: Centers for Disease Control and Prevention (CDC), 1999.

Hoyert DL, Kochanek KD, Murphy SL. Deaths: Final Data for 1997. *National vital statistics reports*; vol 47 no. 19. Hyattsville, Maryland: National Center for Health Statistics. 1999.

Maynard RA, ed., *Kids having kids, economic costs and social consequences of teen pregnancy*, Urban Institute Press, Washington, DC, 1997.

St. Louis ME, Wasserheit JN, Gayle HD, Janus considers the HIV pandemic--harnessing recent
advances to enhance AIDS prevention. *Am J Public Health* , 87(1):10-2, 1997.

Holtgrave DR, Pinkerton SD, Updates of cost of illness and quality of life estimates for use in economic evaluations of HIV prevention programs. *J Acquir Immune Defic Syndr Hum Retrovirol.* 16(1):54-62, 1997.

Mental Health

Bromet EJ, Psychiatric disorders. In *Public Health and Preventive Medicine,* Wallace RB (ed.), Fourteenth Edition, Appleton & Lange, Stamford, Connecticutt, 1998, p. 1037.

Office of Applied Statistics, Statistics Source Book,1998, Rouse BA (ed.), Substance Abuse and Mental Health Services Administration, Rockville, MD, U.S. Department of Health and Human Services, 1998.

National Institute of Mental Health, *The invisible disease—depression,* Fact Sheet, http://www.nimh.nih.gov/publicat/invisible.cfm, National Institute of Mental Health, National Institutes of Health, Bethesda, MD, U.S. Department of Health and Human Services, 1999.

Weissman MM, Klerman JK, Depression: current understanding and changing trends. *Annual Review of Public Health,* 13:319-39, 1992.

Koenig HG, Blazer DG, Mood disorders and suicide. In *Handbook of Mental Health and Aging,* Birren JE, Sloane RB, Cohen GD, (eds.), Second Edition, Academic Press, San Diego, CA, 1992, 379-407.

National Institutes of Health, Consensus Development Panel on Depression in Late Life, Diagnosis and treatment of depression in late life. *Journal of the American Medical Association,* 268:1018-1024, 1992.

National Institute of Mental Health, *Depression,* Fact Sheet, http://www.nimh.nih.gov/depression/index.htm, National Institute of Mental Health, National Institutes of Health, Bethesda, MD, U.S. Department of Health and Human Services, 1999.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99.* Hyattsville, Maryland: Public Health Service. 1999.

Substance Abuse and Mental Health Services Administration, *Mental Health: A Report of the Surgeon General.* Substance Abuse and Mental Health Services Administration, National Institutes of Health, U.S. Department of Health and Human Services, In press, 1999.

Greenberg PE, Stiglin LE, Finkelstein SN, Berndt ER, The economic burden of depression in 1990, *Journal of Clinical Psychiatry,* 54:405-18, 1993.

Injury and Violence

Hoyert DL, Kochanek KD, Murphy SL. Deaths: Final Data for 1997. *National vital statistics reports*; vol 47 no. 19. Hyattsville, Maryland: National Center for Health Statistics. 1999.

Baker SP, O'Neill B, Ginsburg MJ, Li G, *The Injury Fact Book,* 2nd Ed., Oxford University Press, New York, NY, 1992.

National Highway Traffic Safety Administration, *Traffic Safety Facts, 1998.* National Highway Traffic Safety Administration, U.S. Department of Transportation, 1998.

National Center for Health Statistics. *Healthy People 2000 Review, 1998-99.* Hyattsville, Maryland: Public Health Service. 1999.

National Center for Injury Prevention and Control, *Impaired driving fact sheet.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 1999.

Fox JA, Zawitz MW, *Homicide trends in the United States.* Bureau of Justice Statistics, U.S. Department of Justice, 1999.

National Safety Council, *Accident Facts, 1995.*

Environmental Quality

World Health Organization Fact Sheet 170, June 1997.

U.S. Environmental Protection Agency (EPA). National Air Quality and Trends Report, Office of Air and Radiation, Washington, DC: U.S. Environmental Protection Agency, 1997.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.
CDC. State-specific prevalence of cigarette smoking among adults, and children's and adolescent's exposure to environmental tobacco smoke—United States. *Morbidity and Mortality Weekly Report* 46:1038-1043, 1997.

U.S. Environmental Protection Agency (EPA). *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders.* EPA Pub. No. EPA/600/6-90/006F. Washington, DC: U.S. Environmental Protection Agency, 1992.

California Environmental Protection Agency, *Health Effects of Exposure to Environmental Tobacco Smoke*. Final Report. Sacramento, CA: California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 1997.

CDC. Progress toward the elimination of tuberculosis—United States, 1998. *Morbidity and Mortality Weekly Report* 48:732-736, 1999.

American Lung Association, *Health Costs of Air Pollution*, 1990.

Weiss, K.B.; Gergen, P.J.; Hodgson, T.A. 1992. An economic evaluation of asthma in the United States. *New England Journal of Medicine* 326:862-866.

Immunization

CDC. Ten Great Public Health Achievements—United States, 1900-1999. *Morbidity and Mortality Weekly Report* 48:241-248, 1999.

CDC, Recommended Childhood Immunization Schedule—United States, 1999. *Morbidity and Mortality Weekly Report* 48:12-16, 1999.

CDC. National vaccination coverage levels among children aged 19-35 months—United States, 1998. *Morbidity and Mortality Weekly Report* 48:829-830, 1999.

Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. *Socioeconomic Status and Health Chartbook. Health, United States, 1998.* Hyattsville, Maryland: National Center for Health Statistics. 1998.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyattsville, Maryland: 1999.

CDC. Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report* 1999;48(no. RR-4).

Feiken DR, Schuchat A, Kolczak M, et al. Mortality from invasive pneumococcal pneumonia in the era of antibiotic resistance, 1995-1997. *American Journal of Public Health,* 2000; 90, in press.

CDC. Prevention pneumococcal disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report* 1997;46(no. RR-8).

CDC. Reasons reported by Medicare beneficiaries for not receiving influenza and pneumococcal vaccinations—United States, 1996. *Morbidity and Mortality Weekly Report* 48:886-890, 1999.

CDC, National Immunization Program. Immunization Services Division. Health Services Research and Evaluation Branch. Unpublished data. Atlanta, GA, 1999.

Health Care Access

CDC. Health insurance coverage and receipt of preventive health services—United States, 1993. *Morbidity and Mortality Weekly Report,* 44(11);219-225, 1995.

U.S. General Accounting Office, *Health insurance: coverage leads to increased health care access for children.* GAO/HEHS-98-14. General Accounting Office, Washington, DC, 1998, pp. 4-20.

National Center for Health Statistics. *Health, United States, 1999 With Health and Aging Chartbook.* Hyatts

FAX TRANSMISSION

DEMOCRATIC OFFICE OF
THE UNITED STATES SENATE
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS

TO: Deborah Koller

FROM: Scott Boule / Stephanie Robinson

FAX #: 456-5557

DATE: 12/14 TOTAL PAGES (INCLUDING COVER) 43

IF THERE ARE ANY PROBLEMS RECEIVING THIS TRANSMISSION, PLEASE CALL (202) 224-0767

RETURN FAX # (202) 224-5128

COMMENTS:

Also check out the 10M study on NCI released in February [redacted] (much too long to fax). Let me know if you have any questions. Great to talk to you!

Scott
224-8750

Unfortunately, the majority of performance-based bonus programs are offered only to one segment of the American workforce: those employees who are salaried and therefore "exempt" from many of the strictures of the Fair Labor Standards Act. The other 70-plus million Americans who get paid by the hour are precluded from fully participating in these programs. Why is this? If performance bonuses work so well, why aren't they offered to more hourly wage workers?

The answer is that the 61-year-old FLSA requires that when such bonuses are provided to hourly workers, the employer must then re-calculate each employee's "regular rate" of pay, which in turn requires a recalculation of worker's overtime pay. This process of recalculating employee overtime can consume substantial administrative time, often for very little in the way of additional overtime pay. One human resources director testified before Congress that it took four people 160 hours to calculate the bonuses for 235 employees.

This requirement can be particularly burdensome for many of the nation's millions of small businesses that may not have computer hardware and software that can run these types of calculations. For employers who must try to do these calculations by hand, it can be such a headache that the employer will either drop the bonus program altogether or simply ignore the law, both of which are obviously undesirable outcomes.

The Bonus Incentive Act I am introducing today will alleviate this unnecessary and counterproductive requirement, and allow all employees to participate equally in gainsharing programs. In fact, by extending these programs to hourly wage employees who, on average, make less than their salaried counterparts, this bill could be a significant shot-in-the-arm to their take home pay. The Employee Policy Foundation reports that a median wage U.S. worker could earn between an additional $17,000 and $26,000 over a 20-year period by participating in a performance-based bonus plan.

Why would anyone oppose this bill, Mr. President? It is good for employers and employees alike. It means less paperwork and more pay, less bureaucracy and more productivity.

Some have raised the concern that employers may somehow attempt to disguise regular hourly pay as gainsharing bonuses. While it would take a very ambitious employer to make such a scheme profitable, particularly considering the impact such conduct would have on employee morale, there are protections in the bill against such a possibility.

First, the employer must provide all employees, in writing, a detailed description of what the requirements and benefits of the gainsharing plan will be. The actual formula by which the bonus is to be calculated must also be spelled-out. There can be no doubt about what the employee would be required to do and what he or she would stand gain.

Second, the employer is absolutely prohibited from using a performance-based bonus to in any way replace the hourly wage pay the employee would otherwise have received. In fact, the bill requires that the plan be "established and maintained in good faith for the purpose of distributing to employees additional remuneration over and above the wages and salaries that are not dependent upon the existence of such plan." If an employer should violate this and, for example, but workers pay and substitute that for bonus pay, that employer would be subject to the same civil and even criminal sanctions as he would for any violation of the Fair Labor Standards Act, which is vigorously enforced by the U.S. Department of Labor's Wage and Hour Division.

But the truth is, Mr. President, that there is very little reason for employers today to abuse this provision, and every reason in the world to use it for the betterment of employees and to the long-term success of the company. If the tremendous economic revolution and growth we have witnessed in the last two decades has taught us anything, it is that wealth is not a zero-sum game. Our economy continues to outstrip that of the rest of the world not because we have more natural resources: other countries have more oil, gold, timber, and other resources than we. It is because the productive capacity, ingenuity, and entrepreneurship of the American people is allowed to flourish under our system.

Outdated laws such as this must be revised if we are to continue to enjoy the growing fruits of our labor. The Bonus Incentive Act will help accomplish this goal, and I urge my colleagues to support and pass it.

---

* By Mr. KENNEDY (for himself, Mr. AKAKA, Mr. INOUYE, Mrs. LINCOLN, and Mr. WELLSTONE):

S. 1880. A bill to amend the Public Health Service Act to improve the health of minority individuals; to the Committee on Health, Education, Labor, and Pensions.

HEALTH CARE FAIRNESS ACT OF 1999

Mr. KENNEDY. Mr. President, over the past few decades, we have made extraordinary advances as a nation in science and medicine. Unfortunately, those advances are not benefitting all of our citizens equally. Minority communities suffer disproportionately from many severe health problems.

We know that poverty, lack of health insurance, and other barriers to care continue to undermine the health of minorities. Clearly we need to do more to give all Americans the fair chance for a healthy future that they deserve.

The Administration has taken important steps to address this challenge. Last year, the President announced the Initiative to Eliminate Racial and Ethnic Disparities in Health. This initiative, led by the Department of Health and Human Services, has identified several areas where new commitments, new ideas, and new resources are necessary. The goal is to eliminate disparities in the areas of cardiovascular disease, cancer screening and management, diabetes, infant mortality, HIV/AIDS, and immunizations by 2010. This ambitious goal cannot be met without a major effort to improve research on the health of minorities and develop the steps needed to reduce these disparities.

Today, Senators AKAKA, INOUYE, LINCOLN, WELLSTONE, and I are introducing the Health Care Fairness Act of 1999, to secure the commitment and resources needed in each of these areas to ensure that minorities have a fair chance for improved health.

Minority populations suffer disproportionately from cardiovascular disease. They have a greater risk of developing high blood pressure, and are less likely to receive treatment to manage the condition after it develops. As a result, African Americans are 40 percent more likely to die from coronary heart disease than whites.

A Georgetown University study published in the New England Journal of Medicine last February found that bias in the decisions made by doctors is a factor in the treatment that African Americans receive when they suffer from heart disease. These findings are based on an experiment where physicians volunteered to view a video of actors posing as patients with significant symptoms of heart disease. The physicians were asked to prescribe further interventions for each "patient," all of whom had identical medical histories, insurance coverage, and occupations. While 91 percent of the white males, white females, and African American males in the study were referred for cardiac catheterization, a more effective but more expensive diagnostic procedure, only 78 percent of the African American females in the study were referred for this test.

A study published in the New England Journal of Medicine last month found similar disparities in the treatment of lung cancer. Patients whose tumors are discovered early are often able to be cured with surgery. This study found that African American patients with tumors small enough to be surgically removed were treated surgically in only 64 percent of cases, compared with 77 percent of white patients treated surgically. As a result, African Americans have only a 26 percent chance of surviving lung cancer, compared with a 34 percent survival rate for whites.

Other types of cancer also strike racial and ethnic minorities in disproportionate numbers. Vietnamese American women are five times more likely than white women to contract cervical cancer. Hispanic women are twice as likely to contract cervical cancer. Native Hawaiian men are 13 percent more likely to contact lung cancer. Alaskan

Native women are 72 percent more likely to contract colon cancer and rectal cancer, when compared with whites. In addition, African Americans and Hispanic Americans are more likely to be diagnosed with cancer once the disease has reached an advanced stage. For African Americans, the result is a 35 percent higher death rate.

The Institute of Medicine, issued a report last February concluding that federal efforts to research cancer in minority communities are insufficient. The report recommended an increase in resources and the development of a strategic plan to coordinate this research. The results of this study confirm that while NIH has been extremely successful in producing medical breakthroughs that improve health care, those breakthroughs do not always reach into racial and ethnic communities.

The same troubling differences are found with HIV/AIDS. The powerful new drugs that have dramatically decreased AIDS deaths and prevented or delayed progression from HIV to AIDS for so many citizens are not reaching minorities in proportion to their need. Racial and ethnic minorities make up approximately 25 percent of the total population, but these groups account for over half of all AIDS cases. The disparity is even greater for African American and Hispanic women, who account for nearly 80 percent of the AIDS cases reported among women.

In spite of recent bipartisan efforts to increase access to health care for all children, racial and ethnic disparities exist among young Americans as well. Minority children are less likely to receive prescription medications, and they have lower immunization rates than white children. Inadequate health care places a barrier in the path of healthy development for minority children, and that is an unfair disadvantage.

The Health Care Fairness Act of 1999 addresses these racial and ethnic health disparities in many ways. It contains sections on research, data collection, medical education, and outreach. Each of these aspects has an important role to play in the reduction and eventual elimination of these unacceptable health disparities.

Title I establishes a Center for Research on Minority Health at the National Institutes of Health. The Center will oversee the development of an NIH-wide strategic plan for minority health research. This step will enable those concerned with the advancement of research on minority health, both inside and outside NIH, to monitor the progress of NIH in this area. The Center will award Centers of Excellence grants to institutions across the country that serve under-represented populations. These funds will be used to conduct research into the nature, causes, and remedies for health disparties, to train minorities to become biomedical research professionals, to improve the infrastructure for conducting biomedical research on health disparties, and to provide long-term stability to these biomedical research programs.

Changing attitudes about race and ethnic backgrounds are an ongoing challenge for all sectors of our society. The Georgetown study does not conclude that most doctors are racist. No such assumptions are drawn from its results. What is shown is that health care providers, like all members of our society, enter their profession with perceptions and biases related to race. Many industries have confronted racial sensitivity issues in their training programs. This study shows that such training must also be a part of medical education, for both new students and experienced practitioners alike.

To help health care providers improve their ability to work with patients of different backgrounds, we must also develop educational techniques that are effective in improving this aspect of health care delivery. Title II of the Health Care Finance Act establishes demonstration projects to develop effective educational techniques such as courses that focus on reducing racial and ethnic disparties in health care.

The close connection between race and poverty in this country has had a significant negative impact on the access of minority communities to quality health care. Reducing racial and ethnic health disparties will require a better understanding of issues beyond effective treatments and other questions of basic science. Barriers to care, poor quality health services, and the lack of useful outcome measures are all part of this complex problem. Title III of our bill strengthens the federal commitment to these social science aspects of health disparties. It directs the Agency for Health Care Policy and Research to conduct and support research in these areas, to promote effective interventions in minority communities, and to develop outcome measures to assess and improve health care for minority populations.

Measuring our progress in reducing these racial and ethnic disparties will also require reliable and complete data on miniority health. In order to provide reliable information on the health status of minority communities, Title IV of our bill directs the National Academy of Sciences to conduct a study of the data collection and reporting systems at the Department of Health and Human Services that include race and ethnicity.

This study will evaluate the effectiveness of data collection at HHS and recommend improvements for ensuring that reliable and complete information on racial and ethnic health disparties is available.

The estimated cost of these provisions for fiscal year 2000 totals just under $350 million. The estimated cost in subsequent years is approximately $260 million. This is a small price when compared to the damage that racial and ethnic health disparties are causing in so many communities. We all know that in the long run better health is always less expensive than sickness and hospitalization.

We know that many other structural, personal, and historical factors contribute to racial and ethnic disparties in health care. Our legislation asks that we make the elimination of these disparties a higher priority. It asks that we do all we can to develop the knowledge necessary to do better. The result will be a fairer chance for the healthy future that all Americans deserve, and I look forward to early action by Congress on this needed legislation.

Mr. President, I ask unanimous consent that the full text of the bill and the accompanying letters and statement of support be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

S. 1880

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Health Care Fairness Act of 1999".

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

SEC. 2. FINDINGS.

Congress makes the following findings:

(1) The United States ranks below most industrialized nations in health status as

measured by longevity, sickness, and mortality.

(2) The United States ranks 24th among industrialized nations in infant mortality.

(3) This poor rank in health status is attributed in large measure to the lower health status of America's minority populations.

(4) Many minority groups suffer disproportionately from cancer. Disparities exist in both mortality and incidence rates. For men and women combined, African Americans have a cancer death rate about 35 percent higher than that for whites. Paralleling the death rate, the incidence rate for lung cancer in African American men is about 50 percent higher than white men. Native Hawaiian men also have elevated rates of lung cancer compared with white men. Alaskan Native men and women suffer from higher rates of cancers of the colon and rectum than do whites. Vietnamese women in the United States have a cervical cancer incidence rate more than 5 times greater than white women. Hispanic women also suffer elevated rates of cervical cancer.

(5) Infant death rates among African American, Native Americans and Alaskan Natives, and Hispanics were well above the national average. The greatest disparity exists for African Americans. The overall Native American rate does not reflect the diversity among Indian communities, some of which have infant mortality rates approaching twice the national rate.

(6) Sudden infant death syndrome (referred to in this section as "SIDS") accounts for approximately 10 percent of all infant deaths in the first year of life. Minority populations are at greater risk for SIDS. In addition to the greater risks among African Americans, the rates are 3 to 4 times as high for some Native American and Alaskan Native populations.

(7) Cardiovascular disease is the leading cause of death for all racial and ethnic groups. Major disparities exist among population groups, with a disproportionate burden of death and disability from cardiovascular disease in minority and low-income populations. Stroke is the only leading cause of death for which mortality is higher for Asian-American males than for white males.

(8) Racial and ethnic minorities have higher rates of hypertension, tend to develop hypertension at an earlier age, and are less likely to undergo treatment to control their high blood pressure.

(9) Diabetes, the seventh leading cause of death in the United States, is a serious public health problem affecting racial and ethnic communities. The prevalence of diabetes in African Americans is approximately 70 percent higher than whites and the prevalence in Hispanics is nearly double that of whites. The prevalence rate of diabetes among Native Americans and Alaskan Natives is more than twice that for the total population and at least 1 tribe, the Pimas of Arizona, have the highest known prevalence of diabetes of any population in the world.

(10) The human immunodeficiency virus (referred to in this section as "HIV"), which causes acquired immune deficiency syndrome (referred to in this section as "AIDS"), results in disproportionate suffering in minority populations. Minority persons represent 25 percent of the total United States population, but 54 percent of all cases of AIDS.

(11) More than 75 percent of AIDS cases reported among women and children occur in minority women and children.

(12) Nearly 2 of 5 (38 percent) Hispanic adults, 1 of 4 (24 percent) African American adults, and 1 of 4 (24 percent) Asian-American adults are uninsured, compared with 1 of 7 (14 percent) white adults.

(13) Elderly minorities experience disparities in access to care and health status, in part because medicare covers only half the health care expenses of older Americans.

(14) Two of 5 Hispanic and 2 of 5 African Americans age 65 and older rate their health status as fair or poor, compared with less than 1 of 4 (23 percent) white Americans 65 and over.

(15) Nearly 2 of 5 (39 percent) African American adults and almost half (46 percent) of Hispanic adults report that they do not have a regular doctor, compared with 1 of 4 (28 percent) of white adults.

(16) Minority Americans 65 and older are less likely to have a regular doctor or to see a specialist.

(17) Ninety percent of minority physicians produced by Historically Black Medical Colleges live and serve in minority communities.

(18) Almost half (45 percent) of Hispanic adults, 2 of 5 (41 percent) Asian-American adults, and more than 1 of 3 (35 percent) African American adults report difficulty paying for medical care, compared with 1 of 4 (26 percent) white adults.

(19) Despite suffering disproportionate rates of illness, death, and disability, minorities have not been proportionately represented in many clinical research trials, except in studies of behavioral risk factors associated with negative stereotypes.

(20) Culturally sensitive approaches to research are needed to encourage minority participation in research studies.

(21) There is a national need for minority scientists in the field of biomedical, clinical, and health services research.

(22) In 1980, only 3.3 percent of all United States medical school faculties were underrepresented minority persons.

(23) Only 1 percent of full professors were underrepresented minority persons in 1990.

(24) The proportion of underrepresented minorities in high academic ranks, such as professors and associated professors, decreased from 1980 to 1990.

(25) African Americans with identical complaints of chest pain are less likely than white Americans to be referred by physicians for sophisticated cardiac tests.

(26) Cultural competency training in medical schools and residency training programs has the potential to reduce disparities in health care and health outcomes.

(27) More detailed data on health disparities is needed to—

(A) evaluate the impact that race and ethnicity have on health status, access to care, and quality of care; and

(B) enforce existing protections for equal access to care.

TITLE I—IMPROVING MINORITY HEALTH THROUGH THE NATIONAL INSTITUTES OF HEALTH

SEC. 101. RESEARCH ON MINORITY HEALTH.

Title IV of the Public Health Service Act (42 U.S.C. 281 et seq.) is amended by adding at the end the following:

"PART J—RESEARCH ON MINORITY HEALTH

"SEC. 490A. ESTABLISHMENT OF CENTER.

"(a) IN GENERAL.—There is established within the National Institutes of Health an organization to be known as the Center for Research on Minority Health and Health Disparities (referred to in this part as the 'Center'). The Center shall be headed by a director, who shall be appointed by the Secretary and shall report to the Director of the National Institutes of Health.

"(b) TASK FORCE.—The Director of the Center shall chair a trans-NIH task force that is composed of Institute Directors, NIH senior staff, and representatives of other public health agencies, that will establish a comprehensive plan and budget estimates under section 490C for minority health that should be conducted or supported by the national research institutes, and shall recommend an agenda for conducting and supporting such research.

"(c) DUTIES.—

"(1) INTERAGENCY COORDINATION OF MINORITY HEALTH RESEARCH.—With respect to minority health, the Director of the Center shall facilitate the establishment of, and provide administrative support to, the task force referred to in subsection (b) to plan, coordinate, and evaluate all research conducted at or funded by NIH.

"(2) MINORITY HEALTH RESEARCH INFORMATION SYSTEM.—The Director of the Center shall establish a minority health research information system in order to track minority-related research, training, and construction. The system shall capture, for each minority-related research, training, or construction project year-end data.

"(3) CONSULTATIONS.—The Director of the Center shall carry out this part (including developing and revising the plan required in section 490C) in consultation with the Advisory Council established under section 499B, the heads of the agencies of the National Institutes of Health, and the advisory councils of such agencies.

"(4) COORDINATION.—The Director of the Center shall act as the primary Federal official with responsibility for monitoring all minority health research conducted or supported by the National Institutes of Health, and—

"(A) shall serve to represent the National Institutes of Health minority health research program at all relevant Executive branch task forces, committees and planning activities; and

"(B) shall maintain communications with all relevant Public Health Service agencies and with various other departments of the Federal Government, to ensure the timely transmission of information concerning advances in minority health research between these various agencies for dissemination to affected communities and health care providers.

"(d) INNOVATIVE GRANTS.—

"(1) IN GENERAL.—The Director of the Center, in consultation with the Advisory Council, shall identify areas of insufficient minority health research at the Institutes and Centers, and shall provide funds to the Institutes and Centers for the awarding of peer-reviewed grants for innovative projects that address high priority areas of minority health research that are not adequately addressed by other Institutes or Centers.

"(2) EXCEPTIONAL CIRCUMSTANCES.—

"(A) IN GENERAL.—If the Director of the Center determines that the Institutes or Centers are unwilling or unable to award a grant under paragraph (1) for the conduct of a research project identified under such paragraph, the Director, in consultation with the Advisory Council, shall award 1 or more peer reviewed grants to support such research project.

"(B) LIMITATION.—The total amount of grants awarded under subparagraph (A) for a fiscal year shall not exceed an amount equal to 10 percent of the total final budget for the minority health disparities comprehensive plan for the National Institutes of Health for the fiscal year, or $130,000,000, whichever is greater.

"(3) ADMINISTRATION OF RESEARCH PROPOSALS.—

"(A) REQUESTS.—The Director of the Center may issue requests for research proposals in areas identified under paragraph (2)(A).

"(B) DELEGATION.—The Director of the Center may delegate responsibility for the

review and management of research proposals under this subsection to another Institute or Center, or to the Center for Scientific Review.

"(C) FINAL APPROVAL.—The Director of the Center may issue a final approval of research awards under paragraph (1) so long as such approval is provided within 30 days of the date on which the award is approved by an Institute or Center.

"(e) DEFINITIONS.—In this part:

"(1) MINORITY HEALTH CONDITIONS.—The term 'minority health conditions', with respect to individuals who are members of racial, ethnic, and indigenous (including Native Americans, Alaskan Natives, and Native Hawaiians) minority groups, means all diseases, disorders, and conditions (including with respect to mental health)—

"(A) unique to, more serious, or more prevalent in such individuals;

"(B) for which the factors of medical risk or types of medical intervention are different for such individuals; or

"(C) which have been found to result in health disparities but for which insufficient research has been conducted.

"(2) MINORITY HEALTH RESEARCH.—The term 'minority health research' means basic and clinical research on minority health conditions, including research on preventing such conditions.

"SEC. 486B. ADVISORY COUNCIL.

"(a) IN GENERAL.—The Secretary shall establish an advisory council (referred to in this part as the 'Advisory Council'), pursuant to the Federal Advisory Committee Act, for the purpose of providing advice to the Director of the Center on carrying out this part.

"(b) COMPOSITION.—The Advisory Council shall be composed of not less than 18, and not more than 24 individuals, who are not officers or employees of the Federal Government, to be appointed by the Secretary. A majority of the members of the Advisory Council shall be individuals with demonstrated expertise regarding minority health issues. The Advisory Council shall include representatives of communities impacted by racial and ethnic health disparities. The Director of the Center shall serve as the chairperson of the Advisory Council.

"SEC. 486C. COMPREHENSIVE PLAN AND BUDGET.

"(a) IN GENERAL.—Subject to this section and other applicable law, the Director of the Center (in consultation with the Advisory Council) and the members of the Task Force established under section 486A, in carrying out section 486A, shall—

"(1) establish a comprehensive plan and budget for the conduct and support of all minority health research activities of the agencies of the National Institutes of Health (which plan shall be first established under this subsection not later than 12 months after the date of the enactment of this part), which budget shall be submitted to the Secretary, the Director of the Office of Management and Budget and Congress and included in the annual budget justification for the National Institutes of Health;

"(2) ensure that the plan and budget establishes priorities, consistent with sound medical and scientific judgment, among the minority health research activities that such agencies are authorized to carry out;

"(3) ensure that the plan and budget establishes objectives regarding such activities, describes the means for achieving the objectives, and designates the date by which the objectives are expected to be achieved;

"(4) ensure that all amounts appropriated for such activities are expended in accordance with the plan and budget;

"(5) review the plan and budget not less than annually, and coordinate revisions to the plan as appropriate; and

"(6) ensure that the plan and budget serve as a broad, binding statement of policies regarding minority health research activities of the agencies, but does not remove the responsibility of the heads of the agencies for the approval of specific programs or projects, grant management, or for other details of the daily administration of such activities, in accordance with the plan and budget.

"(b) CERTAIN COMPONENTS.—With respect to minority health research activities of the agencies of the National Institutes of Health, the plan and budget shall—

"(1) provide for basic research;

"(2) provide for clinical research;

"(3) provide for research that is conducted by the agencies;

"(4) provide for research that is supported by the agencies;

"(5) provide for proposals developed pursuant to solicitations by the agencies and for proposals developed independently of such solicitations; and

"(6) provide for prevention research, behavioral research and social sciences research.

"(c) APPROVAL.—The plan and budget established under this section are subject to the approval of the Director of the Center and the Director of the National Institutes of Health.

"(d) BUDGET ITEMS FOR MINORITY HEALTH.—In the Budget of the United States that is submitted to Congress by the President, the President shall, with respect to each Institute or agency of the National Institutes of Health, include a separate line item account for the amount that each such Institute or agency requests for minority health activities.

"SEC. 486D. CENTER FUNDING.

"For the purpose of carrying out administrative functions related to minority health research activities under the plan under sections 486A, 486B, and 486C, there are authorized to be appropriated $100,000,000 for fiscal year 2000, and such sums as may be necessary for each of fiscal years 2001 through 2004.

"SEC. 486E. CENTERS OF EXCELLENCE FOR RESEARCH ON HEALTH DISPARITIES AND TRAINING.

"(a) IN GENERAL.—The Secretary, acting through the Director of the National Institutes of Health, shall make grants to, and enter into contracts with, designated biomedical research institutions described in subsection (c), and other public and nonprofit health or educational entities, for the purpose of assisting the institutions in supporting programs of excellence in biomedical research education for under-represented minority individuals.

"(b) REQUIRED USE OF FUNDS.—

"(1) IN GENERAL.—The Secretary may not make a grant under subsection (a) unless the designated biomedical research institution involved agrees, subject to subsection (c)(1)(B), to expend the grant—

"(A) to conduct minority health research and research into the nature of health disparities that affect racial, ethnic, and indigenous minorities, the causes of such disparities, and remedies for such disparities;

"(B) to train minorities as professionals in the area of biomedical research;

"(C) to expand, remodel, renovate, or alter existing research facilities or construct new research facilities for the purpose of conducting biomedical research related to health disparities; or

"(D) to establish or increase an endowment fund in accordance with paragraph (2).

"(2) ENDOWMENT FUNDS.—

"(A) IN GENERAL.—Except as provided in subparagraph (B), an institution that meets the requirements of subparagraph (B) may utilize not to exceed 35 percent of the amounts received under a grant under subsection (a) to establish or increase an endowment fund at the institution. Amounts used under this subparagraph shall be dedicated exclusively to the support of biomedical research and the associated costs of such research.

"(B) REQUIREMENTS.—To be eligible to use funds as provided for under subparagraph (A), an institution shall not have a endowment fund that is worth in excess of an amount equal to 50 percent of the national average of all endowment funds at all institutions that are of the same biomedical research discipline.

"(c) CENTERS OF EXCELLENCE.—

"(1) GENERAL CONDITIONS.—The conditions specified in this paragraph are that a designated biomedical research institution—

"(A) has a significant number of under-represented minority individuals enrolled in the institution, including individuals accepted for enrollment in the institution;

"(B) has been effective in assisting under-represented minority students of the institution to complete the program of education and receive the degree involved;

"(C) has been effective in recruiting under-represented minority individuals to enroll in and graduate from the institution, including providing scholarships and other financial assistance to such individuals and encouraging under-represented minority students from all levels of the educational pipeline to pursue biomedical research careers; and

"(D) has made significant recruitment efforts to increase the number of under-represented minority individuals serving in faculty or administrative positions at the institution.

"(2) CONSORTIUM.—Any designated biomedical research institution involved may, with other biomedical institutions (designated or otherwise) form a consortium to carry out the purposes described in subsection (b) at the institutions of the consortium.

"(3) APPLICATION OF CRITERIA TO OTHER PROGRAMS.—In the case of any criteria established by the Secretary for purposes of determining whether institutions meet the conditions described in paragraph (1), this section may not, with respect to racial, ethnic, and indigenous minorities, be construed to authorize, require, or prohibit the use of such criteria in any program other than the program established in this section.

"(d) DURATION OF GRANT.—The period during which payments are made under a grant under subsection (a) may not exceed 5 years. Such payments shall be subject to annual approval by the Secretary and to the availability of appropriations for the fiscal year involved to make the payments.

"(e) DEFINITIONS.—In this section:

"(1) MINORITY.—The term 'minority' means an individual from a racial or ethnic group that is under-represented in health research.

"(2) PROGRAM OF EXCELLENCE.—The term 'program of excellence' means any program carried out by a designated biomedical research institution with a grant made under subsection (a), if the program is for purposes for which the institution involved is authorized in subsection (b) or (c) to expend the grant.

"(f) FUNDING.—

"(1) AUTHORIZATION OF APPROPRIATIONS.—For the purpose of making grants under subsection (a), there are authorized to be appropriated such sums as may be necessary for each of the fiscal years 2000 through 2004.

"(2) NO LIMITATION.—Nothing in this subsection shall be construed as limiting the centers of excellence referred to in this section to the designated amount, or to preclude such entities from competing for other grants under this section.

"(3) MAINTENANCE OF EFFORT.—

(A) IN GENERAL.—With respect to activities for which a grant made under this part are authorized to be expended, the Secretary may not make such a grant to a center of excellence for any fiscal year unless the center agrees to maintain expenditures of non-Federal amounts for such activities at a level that is not less than the level of such expenditures maintained by the center for the fiscal year preceding the fiscal year for which the institution receives such a grant.

"(B) USE OF FEDERAL FUNDS.—With respect to any Federal amounts received by a center of excellence and available for carrying out activities for which a grant under this part is authorized to be expended, the Secretary may not make such a grant to the center for any fiscal year unless the center agrees that the center will, before expending the grant, expend the Federal amounts obtained from sources other than the grant.

"SEC. 490F. LOAN REPAYMENT PROGRAM FOR BIOMEDICAL RESEARCH.

"(a) IN GENERAL.—The Secretary, acting through the Director of the National Institutes of Health, shall establish a program of entering into contracts with qualified health professionals under which such health professionals agree to engage in minority health research or research into the nature of health disparities that affect racial, ethnic, and indigenous populations, in consideration of the Federal Government agreeing to repay, for each year of such service, not more than $35,000 of the principal and interest of the educational loans of such health professionals.

"(b) SERVICE PROVISIONS.—The provisions of sections 338B, 338C, and 338E shall, except as inconsistent with subsection (a), apply to the program established in such subsection (a) to the same extent and in the same manner as such provisions apply to the National Health Service Corps Loan Repayment Program established in subpart III of part D of title III.

"(c) AVAILABILITY OF APPROPRIATIONS.—Amounts available for carrying out this section shall remain available until the expiration of the second fiscal year beginning after the fiscal year for which the amounts were made available.

"(d) HEALTH DISPARITIES.—In carrying out this section, the Secretary shall take steps sufficient to ensure the active participation of appropriately qualified minority health professionals, including extensive outreach and recruitment efforts. In complying with this subsection, the Secretary shall waive the requirement that the recipients of loan repayment assistance agree to engage in minority health research or research into the nature of health disparities that affect racial, ethnic and indigenous populations.

"(e) AUTHORIZATION OF APPROPRIATIONS.—For the purpose of carrying out this section, there are authorized to be appropriated such sums as may be necessary for each of the fiscal years 2000 through 2004.

"SEC. 490G. ADDITIONAL AUTHORITIES.

"(a) IN GENERAL.—In overseeing and supporting minority health research, the Director of the Center—

"(1) shall assist the Director of the National Center for Research Resources in carrying out section 481(c)(3) and in committing resources for construction at Institutions of Emerging Excellence;

"(2) shall assist in the administration of section 492B with respect to the inclusion of members of minority groups as subjects in clinical research; and

"(3) subject to section 405(h)(2) and without regard to section 3324 of title 31, United States Code, and section 3709 of the Revised Statutes (41 U.S.C. 5), may enter into such contracts and cooperative agreements with any public agency, or with any person, firm, association, corporation, or educational institution, as may be necessary to expedite and coordinate minority health research.

"(b) REPORT TO CONGRESS AND THE SECRETARY.—The Director of the Center shall each fiscal year prepare and submit to the appropriate committees of Congress and the Secretary a report—

"(1) describing and evaluating the progress made in such fiscal year in minority health research conducted or supported by the Institutes;

"(2) summarizing and analyzing expenditures made in such fiscal year for activities with respect to minority health research conducted or supported by the National Institutes of Health; and

"(3) containing such recommendations as the Director considers appropriate.

"(c) PROJECTS FOR COOPERATION AMONG PUBLIC AND PRIVATE HEALTH ENTITIES.—In carrying out subsection (a), the Director of the Center shall establish projects to promote cooperation among Federal agencies, State, local, and regional public health agencies, and private entities, in minority health research.

"SEC. 490H. GENERAL PROVISIONS REGARDING THE CENTER.

"(a) ADMINISTRATIVE SUPPORT FOR CENTER.—The Secretary, acting through the Director of the National Institutes of Health, shall provide administrative support and support services to the Director of the Center and shall ensure that such support takes maximum advantage of existing administrative structures at the agencies of the National Institutes of Health.

"(b) REQUIRED EXPERTISE.—The Director of the Center, in consultation with the Advisory Council and the Center for Scientific Review, shall ensure that scientists with appropriate expertise in research on minority health are incorporated into the review, oversight, and management processes of all research projects in the National Institutes of Health minority health research program and other activities under such program.

"(c) TECHNICAL ASSISTANCE.—The Director of the Center, in consultation with the directors of the national research institutes and centers, shall ensure that appropriate technical assistance is available to applicants for all research projects and other activities supported by the National Institutes of Health minority health research program.

"(d) EVALUATION AND REPORT.—

"(1) EVALUATION.—Not later than 5 years after the date of the enactment of this part, the Secretary shall conduct an evaluation to—

"(A) determine the effect of this section on the planning and coordination of the minority health research programs at the Institutes, centers and divisions of the National Institutes of Health;

"(B) evaluate the extent to which this part has eliminated the duplication of administrative resources among such Institutes, centers and divisions; and

"(C) provide recommendations concerning future alterations with respect to this part.

"(2) REPORT.—Not later than 1 year after the date on which the evaluation is commenced under paragraph (1), the Secretary shall prepare and submit to the Committee on Health, Education, Labor, and Pensions of the Senate, and the Committee on Commerce of the House of Representatives, a report concerning the results of such evaluation.".

TITLE II—MEDICAL EDUCATION

SEC. 201. GRANTS FOR HEALTH CARE EDUCATION CURRICULA DEVELOPMENT.

Part F of title VII of the Public Health Service Act (42 U.S.C. 295j et seq.) is amended by inserting after section 781 the following:

"SEC. 701A. GRANTS FOR HEALTH PROFESSIONS EDUCATION CURRICULA DEVELOPMENT.

"(a) GRANTS FOR GRADUATE EDUCATION CURRICULA DEVELOPMENT.—

"(1) IN GENERAL.—The Secretary, acting through the Administrator for the Health Resources and Services Administration and in collaboration with the Administrator for Health Care Policy and Research and the Deputy Assistant Secretary for Minority Health, may make awards of grants, contracts, or cooperative agreements to public and nonprofit private entities for the purpose of carrying out research projects and demonstration projects to develop curricula to reduce disparity in health care outcomes, including curricula and faculty development for cultural competency in graduate and undergraduate health professions education.

"(2) ELIGIBILITY.—To be eligible to receive a grant, contract or cooperative agreements under paragraph (1), an entity shall—

"(A) be a school of medicine, school of osteopathic medicine, school of dentistry, school of public health, school of nursing, school of pharmacy, school of allied health, or other recognized health profession school; and

"(B) prepare and submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require.

"(3) USE OF FUNDS.—An entity shall use amounts received under a grant under paragraph (1) to carry out research projects and demonstration projects to develop curricula to reduce disparity in health care outcomes, including curricula for cultural competency in graduate medical education. Such curricula shall focus on the need to remove bias from health care at a personal level as well as at a systematic level.

"(4) NUMBER OF GRANTS AND GRANT TERM.—The Secretary shall award not to exceed 20 grants, contracts or cooperative agreements (or combination thereof) under paragraph (1) in each of the first and second fiscal years for which funds are available under subsection (f). The term of each such grant, contract or cooperative agreement shall be 3 years.

"(b) GRANTS FOR CONTINUING HEALTH PROFESSIONAL EDUCATION CURRICULA DEVELOPMENT.—

"(1) IN GENERAL.—The Secretary, acting through the Health Resources and Services Administration and the Agency for Health Care Policy and Research and in collaboration with the Office of Minority Health, shall award grants, contracts or cooperative agreements to eligible entities for the establishment of demonstration projects to develop curricula to reduce disparity in health care and health outcomes, including curricula for cultural competency, in continuing medical education.

"(2) ELIGIBILITY.—To be eligible to receive a grant, contract, or cooperative agreement under paragraph (1) an entity shall—

"(A) be a school of medicine, school of osteopathic medicine, school of dentistry, school of public health, school of nursing, school of pharmacy, school of allied health, or other recognized health profession school; and

"(B) prepare and submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require.

"(3) USE OF FUNDS.—An entity shall use amounts received under a grant, contract, or cooperative agreement under paragraph (1)

to develop and evaluate the effect and impact of curricula for continuing medical education courses or programs to provide education concerning issues relating to disparity in health care and health outcomes, including cultural competency of health professionals. Such curricula shall focus on the need to remove bias from health care at a personal level as well as at a systemic level.

"(4) NUMBER OF GRANTS AND GRANT TERM.—The Secretary shall award not to exceed 20 grants, contracts, or cooperative under paragraph (1) in each of the first and second fiscal years for which funds are available under subsection (f). The term of each such grant shall be 3 years.

"(c) DISTRIBUTION OF PROJECTS.—The Secretary shall ensure that, to the extent practicable, projects under subsections (a) and (b) are carried out in each of the principal geographic regions of the United States and address issues associated with different minority groups and health professions.

"(d) MONITORING.—An entity that receives a grant, contract or cooperative agreement under subsection (a) or (b) shall ensure that procedures are in place to monitor activities undertaken using grant, contract or cooperative agreement funds. Such entity shall annually prepare and submit to the Secretary a report concerning the effectiveness of curricula developed under the grant contract or cooperative agreement.

"(e) REPORT TO CONGRESS.—Not later than January 1, 2002, the Secretary shall prepare and submit to the appropriate committees of Congress, a report concerning the effectiveness of programs funded under this section and a plan to encourage the implementation and utilization of curricula to reduce disparity in health care and health outcomes. A final report shall be submitted by the Secretary not later than January 1, 2004.

"(f) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section, $3,500,000 for fiscal year 2000, $7,000,000 for fiscal year 2001, $7,000,000 for fiscal year 2002, and $3,500,000 for fiscal year 2003."

SEC. 202. NATIONAL CONFERENCE ON CONTINUING HEALTH PROFESSIONAL EDUCATION AND DISPARITY IN HEALTH OUTCOMES.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary of Health and Human Services shall convene a national conference on continuing health professions education as a method for reducing disparity in health care and health outcomes, including continuing medical education on cultural competency. The conference shall include sessions to address measurements of outcomes to assess the effectiveness of curricula in reducing disparity.

(b) PARTICIPANTS.—The Secretary of Health and Human Services shall invite minority health advocacy groups, health education entities described in section 741(b)(1) of the Public Health Service Act (as added by section 201), and other interested parties to attend the conference under subsection (a).

(c) ISSUES.—The national conference convened under subsection (a) shall address issues relating to the role of continuing medical education in the effort to reduce disparity in health care and health outcomes, including the role of continuing medical education in improving the cultural competency of health professionals and health professions faculty. The conference shall focus on methods to achieve reductions in the disparities in health care and health outcomes through continuing medical education courses or programs and on strategies for measuring the effectiveness of curricula to reduce disparities.

(d) PUBLICATION OF FINDINGS.—Not later than 6 months after the convening of the national conference under subsection (a), the Secretary of Health and Human Services shall publish in the Federal Register a summary of the proceedings and the findings of the conference.

(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated such sums as may be necessary to carry out this section.

SEC. 203. ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—The Secretary of Health and Human Services shall establish an advisory committee to provide advice to the Secretary on matters related to the development, implementation, and evaluation of graduate and continuing education curricula for health care professionals to decrease the disparity in health care and health outcomes, including curricula on cultural competency as a method of eliminating health disparity.

(b) MEMBERSHIP.—Not later than 3 months after the date on which amounts are appropriated to carry out this section, the Secretary of Health and Human Services shall appoint the members of the advisory committee. Such members shall be appointed from among individuals who—

(1) unless otherwise specified, are not officers or employees of the Federal Government;

(2) are experienced in issues relating to health disparity; and

(3) meet such other requirements as the Secretary determines appropriate;

and shall include a representative of the Office of Minority Health under section 1707 of the Public Health Service Act (42 U.S.C. 300u-6) and such other representatives of offices and agencies of the Public Health Service as the Secretary determines to be appropriate. The Secretary shall ensure that members of minority communities are well represented on the advisory committee. Such representatives shall include 1 or more individuals who serve on the advisory committee under section 1707(c) of such Act.

(c) COLLABORATION.—The advisory committee shall carry out its duties under this section in collaboration with the Office of Minority Health of the Department of Health and Human Services, and other offices, centers, and institutes of the Department of Health and Human Services, and other Federal agencies.

(d) TERMINATION.—The advisory committee shall terminate on the date that is 4 years after the date on which the first member of the committee is appointed.

(e) EXISTING COMMITTEE.—The Secretary may designate an existing advisory committee operating under the authority of the Office of Minority Health of the Department of Health and Human Services to serve as the advisory committee under this section.

SEC. 204. CULTURAL COMPETENCY CLEARINGHOUSE.

(a) ESTABLISHMENT.—The Director of the Office of Minority Health of the Department of Health and Human Services shall establish within the Resource Center of the Office of Minority Health, or through the awarding of a contract provide for the establishment of, an information clearinghouse for curricula to reduce racial and ethnic disparity in health care and health outcomes. The clearinghouse shall facilitate and enhance, through the effective dissemination of information, knowledge and understanding of practices that lead to decreases in the disparity of health across minority and ethnic groups, including curricula for continuing medical education to develop cultural competency in health care professionals.

(b) AVAILABILITY OF INFORMATION.—Information contained in the clearinghouse shall be made available to minority health advocacy groups, health education entities described in section 791A(b)(2)(A) of the Public Health Service Act (as added by section 201), health maintenance organizations, and other interested parties.

(c) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated such sums as may be necessary to carry out this section.

TITLE III—MINORITY HEALTH RESEARCH BY THE AGENCY FOR HEALTH CARE POLICY AND RESEARCH.

SEC. 301. MINORITY HEALTH RESEARCH BY THE AGENCY FOR HEALTH CARE POLICY AND RESEARCH.

(a) IN GENERAL.—Part A of title IX of the Public Health Service Act (42 U.S.C. 299 et seq.) is amended by adding at the end the following:

"SEC. 906. RESEARCH ON MINORITY HEALTH DISPARITIES.

"(a) IN GENERAL.—The Administrator of the Agency for Health Care Policy and Research shall—

"(1) conduct and support research to identify how to improve the quality and outcomes of health care services for minority populations and the causes of health disparities for minority populations, including barriers to health care access;

"(2) conduct and support research and support demonstration projects to identify, test, and evaluate strategies for eliminating the disparities described in paragraph (1) and promoting effective interventions;

"(3) develop measures for the assessment and improvement of the quality and appropriateness of health care services provided to minority populations; and

"(4) in carrying out 902(c), provide support to increase the number of minority health care researchers and the health services research capacity of institutions that train minority health care researchers.

"(b) RESEARCH AND DEMONSTRATION PROJECTS.—

"(1) IN GENERAL.—In carrying out subsection (a), the Administrator shall conduct and support research to—

"(A) identify the clinical, cultural, socioeconomic, and organizational factors that contribute to health disparities for minority populations (including examination of patterns of clinical decisionmaking and of the availability of support services);

"(B) identify and evaluate clinical and organizational strategies to improve the quality, outcomes, and access to care for minority populations;

"(C) support demonstrations to test such strategies; and

"(D) widely disseminate strategies for which there is scientific evidence of effectiveness.

"(2) USE OF CERTAIN STRATEGIES.—In carrying out this section the Administrator shall implement research strategies and mechanisms that will enhance the involvement of minority health services researchers, institutions that train minority researchers, and members of minority populations for whom the Agency is attempting to improve the quality and outcomes of care, including—

"(A) centers of excellence that can demonstrate, either individually or through consortia, a combination of multi-disciplinary expertise in outcomes or quality improvement research and a demonstrated capacity to engage minority populations in the planning, conduct and translation of research, with linkages to relevant sites of care;

"(B) provider-based research networks, including health plans, facilities, or delivery system sites of care (especially primary care), that make extensive use of minority health care providers or serve minority patient populations and have the capacity to

evaluate and promote quality improvement; and

"(C) other innovative mechanisms or strategies that will facilitate the translation of patient research investments into clinical practices that can reasonably be expected to benefit those populations.

"(c) QUALITY MEASUREMENT DEVELOPMENT.—

"(1) IN GENERAL.—To ensure that minority populations benefit from the progress made in the ability of individuals to measure the quality of health care delivery, the Administrator of the Agency for Health Care Policy and Research shall support the development of quality of health care measures that assess the experience of minority populations with health care systems, such as measures that assess the access of minority populations to health care, the cultural competence of the care provided, the quality of the care provided, the outcomes of care, or other aspects of health care practice that the Administrator determines to be important.

"(2) REPORT.—Not later than 24 months after the date of enactment of this section, the Secretary, acting through the Administrator, shall prepare and submit to the appropriate committees of Congress a report describing the state-of-the-art of quality measurement for minority populations which will identify critical unmet needs, the current activities of the Department to address those needs, and a description of related activities in the private sector.".

(b) FUNDING.—Section 926 of the Public Health Service Act (42 U.S.C. 299c-6) is amended by adding at the end the following:

"(f) MINORITY HEALTH DISPARITIES RESEARCH.—For the purpose of carrying out the activities under section 906, there are authorized to be appropriated such sums as may be necessary for each of the fiscal years 2000 through 2004.".

TITLE IV—DATA COLLECTION RELATING TO RACE OR ETHNICITY

SEC. 401. STUDY AND REPORT BY NATIONAL ACADEMY OF SCIENCES.

(a) STUDY.—The Secretary of Health and Human Services shall enter into a contract with the National Academy of Sciences for the conduct of a comprehensive study of the Department of Health and Human Services' data collection systems and practices, and any data collection or reporting systems required under any of the programs or activities of the Department, relating to the collection of data on race or ethnicity, including other Federal data collection systems (such as the Social Security Administration) with which the Department interacts to collect relevant data on race and ethnicity.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, the National Academy of Sciences shall prepare and submit to the Committee on Health, Education, Labor, and Pensions of the Senate and the Committee on Commerce of the House of Representatives, a report that—

(1) identifies the data needed to support efforts to evaluate the effects of race and ethnicity on access to and quality of health care and other services and on disparity in health and other social outcomes, the data needed to define appropriate quality of care measures to assess the equivalence of health care outcomes in health care payer systems, and the data needed to enforce existing protections for equal access to health care;

(2) examines the effectiveness of the systems and practices of the Department of Health and Human Services described in subsection (a), including demonstration projects of the Department, and the effectiveness of selected systems and practices of other Federal and State agencies and the private sector in collecting and analyzing such data;

(3) contains recommendations for ensuring that the Department of Health and Human Services, in administering its entire array of programs and activities, collects, or causes to be collected, accurate and complete information relating to race and ethnicity as may be necessary to monitor access to and quality of health care and to ensure the capability to monitor and enforce civil rights laws; and

(4) includes projections about the costs associated with the implementation of the recommendations described in paragraph (3), and the possible effects of the costs on program operations.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as may be necessary for fiscal year 2000 to carry out this section.

TITLE V—PUBLIC AWARENESS

SEC. 501. PUBLIC AWARENESS.

(a) PUBLIC AWARENESS CAMPAIGN.—The Secretary of Health and Human Services, acting through the Surgeon General and the Director of the Office for Civil Rights, shall conduct a national media campaign for the purpose of informing the public about racial and ethnic disparities in health care and health outcomes.

(b) AUTHORIZATION OF APPROPRIATIONS.—For the purpose of carrying out subsection (a), there are authorized to be appropriated such sums as may be necessary for fiscal year 2000.

STATEMENT OF LOUIS W. SULLIVAN, M.D., PRESIDENT, MOREHOUSE SCHOOL OF MEDICINE ON THE HEALTH CARE FAIRNESS ACT OF 1999, NOVEMBER 5, 1999

Thank you for the opportunity to speak in strong support of the Health Care Fairness Act of 1999, which would elevate the NIH's Office of Research on Minority Health to a National Center for Research on Minority Health and Health Disparities. Senator Kennedy and his colleagues are to be commended for their initiative.

For too many years, this country has witnessed one disturbing report after another detailing the growing disparities in health status between our minority and majority populations. Unfortunately, while these reports continue not enough has been done to change this shocking and unacceptable dynamic.

Infant mortality is nearly twice the rate for minorities as it is for non-minorities.

African-Americans, Hispanics, and Native Americans disproportionately suffer a variety of health care disparities including cancer, diabetes, heart disease and stroke.

The HIV virus and AIDS cases result in disproportionate suffering in minority populations. While minorities in the United States represent about 28% of the population, minorities account for 54% of all AIDS cases.

The above mentioned are only a few of the health care challenges faced by minorities and disadvantaged populations.

If we as a nation are to solve these complex problems, we must take an aggressive approach on all fronts. At the core of improving the health status for all Americans is a strong biomedical research effort to understand the factors which contribute to health problems.

During the time I was HHS Secretary, I was very pleased to work with the Congress, particularly Congressman Louis Stokes (D-OH) to establish the existing Office for Research on Minority Health at NIH. Notwithstanding the success of this office in highlighting and addressing health disparities, and in supporting research focused on improving minority health, the magnitude of the problem of health status disparities warrants an even more aggressive effort.

At the beginning of this year, we were very pleased to begin working with Congressman Jesse Jackson, Jr. (D-IL), Charlie Norwood (R-GA), J.C. Watts (R-OK), and Congresswoman Donna Christensen (D-VI) to introduce H.R. 2391, the National Center for Domestic Health Disparities Act of 1999. The bipartisan Jackson bill, and the legislation that is being introduced today, would elevate the existing NIH Office of Research on Minority Health to a National Center for Research on Minority Health and Health Disparities, and provide the National Center with four new major mechanisms, which the existing office does not have. They are:

(1) The Director of the Center will participate with other Institute and Center Directors to determine research policy and initiatives at NIH.

(2) The Center will serve as the catalyst for forward-thinking, strategic planning for the entire NIH, in order to bring all of NIH's considerable resources to bear, to close the health status gap.

(3) The bill empowers the Center Director to make peer-reviewed grants in areas of promising research which are not being addressed by the existing centers and institutes at NIH.

(4) There will be a new program of support for research excellence at those academic health centers which have demonstrated a historic commitment to studying and addressing diseases which disproportionately affect minority Americans. As a result of this legislation, minority investigators and institutions like Morehouse School of Medicine, of which I am President, Meharry Medical College, and others will have access to the types of resources necessary to build and enhance research infrastructure, and seek to compete on a level playing field with other prominent institutions.

I am grateful that both of the comprehensive bills which are being introduced today in the Senate and the House embody these four principles, and I am particularly pleased that both bills enjoy strong bipartisan support.

Today, I am urging members of Congress in both chambers, and from both sides of the aisle to support and cosponsor these important bills. We need to act as quickly as possible to reverse the persistent health status gap, which affects some 28% of our citizens.

ASSOCIATION OF MINORITY
HEALTH PROFESSIONS SCHOOLS,
Washington, DC, November 3, 1999.

Hon. EDWARD M. KENNEDY,
U.S. Senate, Russell Senate Office Building, Washington, DC.

DEAR SENATOR KENNEDY: Thank you for introducing the Health Care Fairness Act of 1999. This important legislation would, among other things, elevate the existing Office of Research on Minority Health at the National Institutes of Health (NIH) to a National Center for Research on Minority Health.

The National Center would be better able to respond to the health status disparity crisis facing minority Americans and medically underserved populations through the establishment of the following provisions:

The Director of the new Center would actively participate with Institute and Center Directors in planning major NIH initiatives.

This includes discussing how NIH's considerable resources can be used to effectively address health status disparities.

The Center Director would be able to make peer-reviewed grants in areas of promising research not currently being addressed by the NIH Institutes and centers.

The Center would establish a Centers of Excellence program to support those academic health centers which have a historic commitment to studying diseases which disproportionately affect minority and disadvantaged populations.

On behalf of the Association of Minority Health Professions Schools, I extend our enthusiastic support for this important legislation. Please advise me as to how we can work with you and other members of the Senate to pass this important legislation.

Thank you again for your leadership in this area.

Sincerely,

RUNNY B. LANCASTER,
President.

NATIONAL MEDICAL ASSOCIATION,
Washington, DC, November 4, 1999.

Hon. EDWARD KENNEDY,
Ranking Minority, Senate Committee on Health, Education, Labor and Pensions, Hart Senate Office Building, Washington, DC.

DEAR SENATOR KENNEDY: The National Medical Association (NMA) is pleased to support the "Health Care Fairness Act of 1999." While the nation has experienced tremendous advances in biomedical research, the benefits of these advances have not fully transferred to the African American and other minority communities, which are unduly plagued with disproportionate rates of death and disease. As the changing demographics of the United States yield growing racial and ethnic minority populations, it is absolutely essential that the nation become more proactive in addressing the critical health and biomedical research needs of communities of color.

Critical provisions of the "Health Care Fairness Act of 1999" include:

The establishment of the Center for Research on Minority Health and Health Disparities at the National Institutes of Health (NIH);

The provision of funds for peer-reviewed minority health-focused research grants, at the Institutes and Centers of the NIH;

The requirement to establish a comprehensive plan and budget for the conduct and support of all minority research activities of the NIH agencies; and

The establishment of a grant program to support the development of culturally competent curricula in health care education.

The NMA supports the "Health Care Fairness Act of 1999" and believes that this legislation will create important opportunities for the nation to make concrete advances in its effort to close the health disparity gap.

Sincerely,

WALTER W. SHERVINGTON,
President.

ASSOCIATION OF
BLACK CARDIOLOGISTS, INC.,
Atlanta, GA, November 4, 1999.

Hon. EDWARD M. KENNEDY,
U.S. Senate, Russell Senate Office Building, Washington, DC.

DEAR HONORABLE SENATOR KENNEDY: The Association of Black Cardiologists, Inc. (ABC) would like to offer its full support of the Health Care Fairness Act of 1999. Its premise and objectives serve to meet the creativity and foresight needed to eliminate the disparity in health care and the mortality race among African Americans versus White Americans. We wholeheartedly endorse the efforts of this bill to improve minority health, minority health research, data collection relating to race or ethnicity, and the promotion of medical education.

A robust economy and years of government pressure have helped move minority groups closer to the mainstream, but when it comes to health studies show a stubborn, daunting and in some respects continuous disparity between Black and White Americans. For decades, Blacks have suffered higher death rates from nearly all-major causes including asthma, diabetes, cancer, major infectious diseases and cardiovascular diseases. The ABC recognizes that cardiovascular diseases, the leading cause of deaths in the United States, affect every family. CVD is the major cause of death for the African American population. Contrary to popular belief, the number one killer in the African American community is not violence, cancer, or AIDS. Blacks are more likely to die from cardiovascular disease than from any other disease. We can reduce the cost of health care, improve patient adherence to prescribed drug regimens, and improve the cultural competence of medical professionals with the passing of this bill.

The ABC mission states: "We believe that good health is the cornerstone of progress for our people. We are firm in our resolve to make exemplary health care accessible and affordable to all in need, dedicated to lowering the high rate of cardiovascular diseases in minority populations and committed to advocacy and diversity. We are guided by high ethics in all our transactions and strive for excellence in our training and skills."

Our mission throughout our organization is to assure that 'African American Children know their Grandparents'. Typically, African American men, with a life expectancy of less than 65 years, die without the joy of nurturing and guiding their grandchildren as only grandparents can.

What we know from our past efforts to address this issue is that it takes a focus effort to increase awareness, to educate, and to eliminate the disparities in health care. We are pleased that this bill will take this direction. Little progress will be made without a strong partnership among medical, public health and community organizations, and government. Please let us know what else we can do to aid in this effort. We applaud your commitment and stand ready to work actively with you to accomplish these objectives.

Sincerely,

B. WAINE KONG,
Chief Executive Officer.

BOSTON UNIVERSITY
SCHOOL OF MANAGEMENT,
Boston, MA, October 14, 1999.

Senator EDWARD M. KENNEDY,
Russell Senate Building,
U.S. Senate, Washington, DC.

DEAR SENATOR KENNEDY: I am writing to register my strong and enthusiastic support for the Comprehensive Minority Health Bill, that is currently under consideration by the United States Senate. Considerable research has documented the great disparities in minority health status and health outcomes nationally. Racial and ethnic minorities are known to suffer disproportionately high mortality and morbidity rates, impaired access to health care, and lower quality health care services. This bill includes a host of provisions that would contribute importantly to the correction of this imbalance. The Bill's proposals: to establish a NIH "Center for Health Disparities Research;" to provide grants to support programs of excellence in biomedical research education for underrepresented minorities; to direct AHCPR to study the causes of health disparities; to expand DHHS collection/reporting of race/ethnicity data; to improve the quality/outcomes of health care services to minority populations; and to develop graduate/continuing medical education curricula devoted to the reduction of disparity in health care and health outcomes, all represent strong actions intended to address the continuing health imbalance for racial/ethnic minorities.

I write as an academic researcher and educator, and as the national director of the Robert Wood Johnson Foundation's Scholarships in Health Policy Research Program, an initiative that supports fellowships for talented young social scientists who are interested in conducting research on critical health and health policy issues facing the United States, including racial/ethnic disparities in health status and health outcomes. I write also as a citizen who is concerned with the needless loss of human potential and quality of life resulting from the continuing health disparities in our society. I call upon you and your colleagues in the U.S. Senate to support this Bill in all of its elements.

Respectfully submitted,

ALAN B. COHEN,
Professor of Health Policy and Management; Director, Health Care Management; Director, RWJF Scholars in Health Policy Research Program.

UCLA,
Los Angeles, CA, October 13, 1999.

Senator EDWARD M. KENNEDY,
Russell Senate Building,
U.S. Senate, Washington, DC.

DEAR SENATOR KENNEDY: I write to register my strong and enthusiastic support for the Comprehensive Minority Health Bill currently under consideration by the United States Senate. Considerable research has documented the great disparities in minority health status and health outcomes nationally. Race and ethnic minorities are known to suffer disproportionate mortality and morbidity rates and lower quality health care services. This bill includes a host of provisions that will contribute to the correction of this imbalance. The Bill's proposals: to establish a NIH "Center for Health Disparities Research"; to provide grants to support programs of excellence in biomedical research education for underrepresented minorities; to direct AHCPR to study the causes of health disparities; to expand HHS collection/reporting of race/ethnicity data and to improve the quality/outcomes of health care services to minority populations and to develop graduate/continuing medical education curricula devoted to the reduction of disparity in health care and health outcomes represent strong actions intended to address the continuing health imbalance for racial/ethnic minorities.

I write as an academic researcher and citizen who is concerned with the needless loss of human potential and quality of life resulting from the continuing health disparities in our society. I call upon you and your colleagues in the U.S. Senate to support this Bill in all of its elements.

Respectfully submitted,

WALTER R. ALLEN,
Professor of Sociology.

Attention: Ms. Stephanie Robinson

OCTOBER 13, 1999.

Senator KENNEDY,
Dirksen Senate Building,
Washington, DC.

DEAR SENATOR KENNEDY: I have read with interest your proposed changes and budget recommendations for the Office of Minority Health "Improving Minority Health Through NIH. As a scholar who does work and collaborations in the field of minority health, and the Chair of a Sociology and Anthropology Department with 62 young scholars in our Graduate Programs, many of whom care about these issues, we are collectively pleased to see this bill brought forward.

Support for intervention and prevention research (of significance) in our community

is too long over overdue. I have held grants from the National Cancer Institute and the National Science Foundation and I know first hand about the obstacles of under funding and a focus that is primarily on advocacy and community based "feel good" projects rather than solid research. Research that could possibly bring about some parity in health and health care for people of color in our society. We in our Medical Sociology Program and colleagues who work in the many disciplines connected to health and quality of life issues applaud you and bring our support by way of many letters like this one. Thank you.

Joy.

FLORENCE B. BONNER,
Chair.

By Mr. DODD:

S. 1881. A bill to amend chapter 84 of title 5, United States Code, to make certain temporary Federal service creditable for retirement purposes; to the Committee on Governmental Affairs.

THE FERS BUYBACK ACT OF 1999

Mr. DODD. Mr. President, today I am introducing the FERS Buyback Act of 1999, legislation that offers retirement security to many federal employees. Companion legislation has already been introduced in the House. Specifically, this legislation would help employees throughout the country hired as temporary workers in the 1980s that continued to work for the federal government into the 1990s.

Hundreds of current and former term employees in federal service find themselves ineligible to receive retirement benefits because of their inability to receive credit for post-1988 service as temporary federal workers.

This legislation would close a loophole in the federal pension system that has adversely impacted many federal workers through no fault of their own. It would change current law to allow individuals who have become eligible for the Federal Employee Retirement System (FERS) the option to receive credit for their past service as temporary employees and pay into the retirement fund for the prior years they worked as temporary employees. Because the legislation would merely allow qualified workers to buy into the retirement system, the government would not incur costs that it would not have incurred had the law treated them as permanent employees.

During the 1980s, the Federal Deposit Insurance Corporation (FDIC) hired thousands of employees under temporary status in response to the savings and loan crisis. Despite their temporary designation, many served in excess of five years with the federal government because of the FDIC's annual renewal of their one-year contracts. Unfortunately, these loyal employees did not enjoy the retirement benefits accorded their colleagues serving the same length of service under permanent status. To their credit, the FDIC did try to rectify the problem several years ago by granting many of their former temporary employees term appointments. Such appointments are for more than one year and allowed employees to be eligible for FERS.

The original FERS Act allowed for employees to make payments or buy back certain years of service prior to 1989 for which deductions were not taken. Therefore, the bill unintentionally denied many federal employees credit for time served after January 1, 1989.

I invite you to join me in correcting this inequity and ask that you cosponsor this fair and straightforward legislation.

By Mrs. HUTCHISON (for herself and Mr. STEVENS):

S. 1882. A bill to expand child support enforcement through means other than programs financed at Federal expense; to the Committee on Finance.

CHILD SUPPORT ENFORCEMENT OPTIONS ACT OF 1999

Mrs. HUTCHISON. Mr. President, I rise today to introduce, along with my colleague, Senator STEVENS, the Child Support Enforcement Options Act of 1999. This bill will give parents the tools and options they need to made sure their children have the resources they need to get a good start in life.

This bill will provide local public agencies and private attorneys access to certain child support enforcement procedures and information not currently available to them. To obtain this access, however, a local public agency or private attorney would first have to obtain a certificate of registration from the Secretary of the Federal Department of Health and Human Services and agree to certain federal requirements and procedures in using the enforcement tools.

Mr. President, in recent years Congress created a number of new information gathering and child support enforcement tools to enable some child support enforcement agencies to better enforce support awards. Unfortunately, these new tools are not available to hundreds of governmental and a growing number of private collection entities which many parents must use or choose to use. These so-called "non IV-D" entities have limited or no access to some new and effective federal collection tools. This legislation will extend these tools to so-called "non IV-D" entities that are properly approved and monitored by the Department of Health and Human Services.

Specifically, the bill will allow non-IV-D government agencies and private collection firms to be able to submit cases for the interception of Federal and State tax refunds for the collection of unpaid child support, in accordance with Federal and State statutory guidelines; to seek passport sanctions against delinquent parents; to report unpaid child support to credit bureaus; and to obtain current location and asset information on parents who owe child support. In addition, the bill provides that unemployment compensation benefits would be subject to income withholding for child support obligations in all child support cases, not just those enforced by a IV-D agency, as current law allows.

Mr. President, my bill will cost the Federal Government minimal or no additional funds. Nor will it impose any significant obligation on state or local child support agencies, since all government agencies would be allowed under the bill to charge necessary fees to non-IV-D agencies with which they share this information.

What this bill will do is take a significant step toward collecting on the estimated $57 billion in overdue child support owed in this country. Many states and local child support agencies are simply overwhelmed and unable to effectively and timely enforce the tens of millions of child support awards in this country. Far from undermining their role in this process, the Child Support Enforcement Options Act will help them accomplish the mutual goal of making sure that child support is collected and delivered to where it is needed the most—to the children to whom it is owed.

Particularly for families on welfare or other public assistance, child support is often critical to make ends meet. It helps put food on the table, clothes in the closet, and gas in the car. When a non-custodial parent reneges on his or her obligation to provide that support, it is incumbent upon the government to help enforce that award, through whatever means are available to the struggling custodial parent. In my opinion, any other consideration is secondary, and I am hopeful and confident that my colleagues in the Senate will agree and will work to pass this important legislation.

By Mr. BINGAMAN:

S. 1883. A bill to amend title 5, United States Code, to eliminate an inequity on the applicability of early retirement eligibility requirements to military reserve technicians; to the Committee on Governmental Affairs.

THE DUAL STATUS NATIONAL GUARD TECHNICIANS RETIREMENT EQUITY ACT

Mr. BINGAMAN. Mr. President, I rise today to introduce a bill that seeks to remove an inequity in retirement pay benefits for critical personnel in our National Guard and Reserve units who are Dual Status Technicians. They are called "Dual Status". Mr. President, because they serve both as military and civilian personnel. There are about 40,000 Dual Status Technicians covered by retirement requirements and restrictions contained in Title 32 of the United States Code. These men and women are the backbone of the National Guard and Reserve structure. They are the mechanics, pilots, engineers, equipment operators, supply and support technicians who keep things running so that the Guard is able to respond to natural disasters and national emergencies, as well as serve on active duty in accordance with the "total force concept" that integrates active and reserve forces in the military.

The New England Journal of Medicine

Special Article

RACIAL DIFFERENCES IN THE TREATMENT OF EARLY-STAGE LUNG CANCER

PETER B. BACH, M.D., LAURA D. CRAMER, SC.M., JOAN L. WARREN, PH.D., AND COLIN B. BEGG, PH.D.

ABSTRACT

Background If discovered at an early stage, non–small-cell lung cancer is potentially curable by surgical resection. However, two disparities have been noted between black patients and white patients with this disease. Blacks are less likely to receive surgical treatment than whites, and they are likely to die sooner than whites. We undertook a population-based study to estimate the disparity in the rates of surgical treatment and to evaluate the extent to which this disparity is associated with differences in overall survival.

Methods We studied all black patients and white patients 65 years of age or older who were given a diagnosis of resectable non–small-cell lung cancer (stage I or II) between 1985 and 1993 and who resided in 1 of the 10 study areas of the Surveillance, Epidemiology, and End Results (SEER) program (10,984 patients). Data on the diagnosis, stage of disease, treatment, and demographic characteristics of the patients were obtained from the SEER data base. Information on coexisting illnesses, type of Medicare coverage, and survival was obtained from linked Medicare inpatient-discharge records.

Results The rate of surgery was 12.7 percentage points lower for black patients than for white patients (64.0 percent vs. 76.7 percent, $P<0.001$), and the five-year survival rate was also lower for blacks (26.4 percent vs. 34.1 percent, $P<0.001$). However, among the patients undergoing surgery, survival was similar for the two racial groups, as it was among those who did not undergo surgery. Furthermore, analyses in which adjustments were made for factors that are predictive of either candidacy for surgery or survival did not alter the influence of race on these outcomes.

Conclusions Our analyses suggest that the lower survival rate among black patients with early-stage, non–small-cell lung cancer, as compared with white patients, is largely explained by the lower rate of surgical treatment among blacks. Efforts to increase the rate of surgical treatment for black patients appear to be a promising way of improving survival in this group. (N Engl J Med 1999;341:1198-205.)

IN the United States, lung cancer is the leading cause of death attributed to cancer among both men and women, claiming the lives of more than 150,000 people each year. About one third of patients with the most common histologic type of lung cancer, non–small-cell cancer, are first given the diagnosis at an early, potentially curable stage. If treated by surgical resection, these patients have a 40 percent likelihood of surviving for five years or longer. In contrast, patients who present with advanced disease or who do not undergo surgical resection have a median survival of less than one year.[1] In the light of this information, it is important to determine whether patients who have potentially curable disease actually receive surgical treatment.

Several studies have uncovered an association between race and the likelihood of receiving surgical treatment for resectable non–small-cell lung cancer. Greenwald et al. found that patients with stage I disease in Seattle, San Francisco, and Detroit were less likely to undergo surgical resection if they were black or of lower socioeconomic status than if they were white or of higher socioeconomic status.[2] Smith et al. found similar disparities in the treatment of black patients and white patients in a cohort in Virginia.[3] Samet et al. found that older age and Hispanic ancestry were associated with lower rates of surgical treatment in a cohort in New Mexico.[4]

We undertook a study to answer two questions about the treatment of early-stage, non–small-cell lung cancer. First, is there a difference in the rate of surgical treatment between white patients and black patients with this type of lung cancer, and if so, is the discrepancy still apparent once we account for the effects of coexisting illness, socioeconomic status, insurance coverage, and availability of care? Second, does this discrepancy in part explain the differences in survival between black patients and white patients with lung cancer? To answer these questions, we

From the Health Outcomes Research Group, Department of Epidemiology and Biostatistics (P.B.B., L.D.C., C.B.B.), and the Department of Medicine, Pulmonary Service (P.B.B.), Memorial Sloan-Kettering Cancer Center, New York; and the Applied Research Branch, National Cancer Institute, Bethesda, Md. (J.L.W.). Address reprint requests to Dr. Bach at the Health Outcomes Research Group, Department of Epidemiology and Biostatistics, Memorial Sloan-Kettering Cancer Center, 1275 York Ave., Box 221, New York, NY 10021.

chose a setting and design that mitigated the effect of the confounding factors. We proposed two hypotheses: that black patients would receive surgical treatment less frequently than white patients and that differences in survival between black patients and white patients would be substantially explained by the difference in the rates of surgical treatment.

METHODS

Sources of Data

We tested our hypotheses with the use of data from the Surveillance, Epidemiology, and End Results (SEER) cancer registries that have been linked with data on Medicare hospitalizations. The SEER–Medicare data base has been used extensively to assess patterns of care for persons with new diagnoses of cancer.[5,6] The SEER registries, sponsored by the National Cancer Institute, list all incident cases of cancer in five metropolitan areas (San Francisco–Oakland–San Jose, Detroit, Atlanta, Seattle, and Los Angeles County) and five states (Connecticut, Utah, New Mexico, Iowa, and Hawaii) and cover approximately 14 percent of the population of the United States.[7] These data contain information on each newly diagnosed case of cancer, including the month and year of the diagnosis; the location, histologic type, nodal involvement, and spread of the tumor; and the type of treatment provided within four months after diagnosis (e.g., surgery or radiation). The site of cancer is coded in the SEER data according to the *International Classification of Diseases for Oncology*, 2nd edition (ICD-O-2).[8]

The Medicare program, which provides health care coverage for 97 percent of persons 65 years of age or older, collects claims for all services covered by the program. Information about hospitalizations is included in the Medicare Provider Analysis and Review (MEDPAR) files, which contain information on all hospital admissions since 1984. Medicare also maintains files that document the dates of death of beneficiaries and whether they were covered by a traditional indemnity program or by a health maintenance organization (HMO).

The SEER and Medicare data bases have been linked in order to permit population-based studies of health outcomes. The data on 94 percent of the persons included in the SEER files who are 65 years of age or older have been successfully linked to Medicare records.[7] Focusing on this group of people who were eligible for Medicare led to the exclusion of the 44 percent of patients in the SEER data base who received diagnoses of lung cancer before the age of 65 years, but this allowed us to adjust for coexisting conditions, eliminated the confounding effects of insurance coverage, and provided sufficient geographic specificity to allow us to control for the availability of health care.

Study Participants

The subjects were persons with a form of lung cancer for which surgical resection has been shown to confer a definitive benefit — stage I or stage II non–small-cell lung cancer.[9] We included all patients classified as non-Hispanic white or black who were 65 years of age or older, who resided in 1 of the 10 SEER areas, and who were given a diagnosis between 1985 and 1993 of primary cancer of the lung, non–small-cell histologic type (SEER codes 34.0 to 34.9 and ICD-O-2 morphology codes 8010 to 8040, 8050 to 8076, 8140, 8250 to 8260, 8310, 8320, 8323, 8430, 8470 to 8490, 8550 to 8573, 8980, and 8981); there were a total of 59,365 patients.

From this group we excluded patients who had not undergone a complete evaluation to determine the stage of disease — that is, those for whom there was either no documentation or incomplete documentation with regard to tumor size, spread, or nodal involvement in the SEER data base (21,006 patients [35.4 percent]). We then identified patients with stage I or stage II disease (12,900 patients) according to the staging system of the American Joint Committee on Cancer,[10,11] using the information in the SEER data base on size, spread, and nodal involvement of the tumor. The definitions of these stages were constant throughout the study period. We then excluded patients for whom diagnoses were obtained from death certificates or at autopsy (127 patients [1.0 percent]) and those in whom a second cancer was diagnosed within two months of the primary lung cancer (1789 patients [13.9 percent]), leaving a cohort of 10,984.

Surgical Treatment and Survival after Diagnosis

Patients were considered to have undergone surgical resection if the variable for site-specific surgery in the SEER data base indicated that a procedure that was curative in intent had been performed. Such procedures included local resection, wedge resection, segmentectomy, lobectomy, sleeve resection, partial pneumonectomy, and radical pneumonectomy (SEER codes 10 to 70). The month and year of diagnosis were documented in the SEER data base; for analytic purposes, we assumed that the diagnosis was made on the first day of the month. Dates of death were obtained from Medicare, which receives this information from the Social Security Administration. All records of death are complete through December 31, 1994, which was therefore chosen as the date of data censoring for patients who were last known to be alive.

Characteristics of the Participants

Demographic Characteristics and Coexisting Illnesses

Information on the sex of the patients was obtained from Medicare records, and information on race and age at diagnosis was obtained from the SEER data base. The socioeconomic status of each patient was estimated on the basis of Medicare data on the median income for the ZIP Code of the patient's residence. This variable was necessarily an aggregate measurement of income, as opposed to a factor that reflected socioeconomic status on an individual basis. We constructed two strata: one containing the patients who resided in areas in the lowest quartile of median income, and the other containing the remaining patients.

The burden of coexisting illness was determined with the use of MEDPAR inpatient records through an examination of all hospital admissions occurring within the 12 months before the month of diagnosis. We calculated two indexes of coexisting illness for each patient: one according to the method suggested by Romano et al.,[12] in which the maximal Charlson comorbidity index[13] was calculated on the basis of inpatient records during this period and the other according to the total number of hospital admissions during this period. In order to calculate these two indexes, we needed one year of recorded Medicare data before diagnosis. We therefore calculated the comorbidity indexes and conducted the adjusted analyses only for patients who at the time of diagnosis were 66 years of age or older and were covered by traditional indemnity insurance, since Medicare does not collect data on hospitalization for persons in HMOs (84 percent of the total sample of 10,984). The Romano–Charlson index could not be determined for patients without a hospitalization during this period.

Access to Care

All patients were insured by Medicare. We assigned each patient the coverage (HMO or indemnity) that he or she had during the month in which the diagnosis was made. To assess the local availability of care, we used the health care service areas defined by the Health Resources and Services Administration. These areas represent regions with certain characteristics of health care availability, and they have been used in other studies of the availability of health care.[14,15] The areas range in size from parts of a city to substantial portions of less populous states. The health care service area corresponding to each patient's area of residence was documented in the SEER data base — our 10,984 study participants resided in 80 health care service areas. To determine whether some of our findings could be related to variations in the local availability of health care services, we looked for heterogeneity in our findings with respect to the health care service areas and SEER areas.

Statistical Analysis

We assessed the association between the race of the patients and the receipt of surgical treatment by comparing the overall rates of resection (among black patients as compared with white patients) for the entire cohort; by comparing the resection rates between black patients and white patients within relevant subgroups, such as those defined by age, comorbidity index, and area of residence; by determining the effect of race on the receipt of surgical treatment while controlling for other important factors, such as sex, median income in the ZIP Code of residence, age, stage of disease, and comorbidity (one of the two measures); and by determining whether the disparities in resection rates were consistent with respect to the SEER area (with use of the Breslow–Day test for heterogeneity), health care service area (with use of the Mantel–Haenszel test for heterogeneity), and study year (with use of the Mantel–Haenszel test).[16]

Survival curves were constructed with the Kaplan–Meier method and compared with use of the log-rank statistic.[17] For analyses involving adjustments for potential confounding factors, we used the Cox proportional-hazards method.[17] All P values are two-sided. All analyses were performed with SAS software (version 6.12, SAS Institute, Cary, N.C.). The estimated survival benefit under a scenario in which black patients received surgical treatment at a rate identical to that of white patients is based on the estimated survival probabilities derived from the observed population.

RESULTS

Characteristics of the Study Participants

There were 10,984 patients in this study; 860 (8 percent) were black, and 10,124 (92 percent) were non-Hispanic white (Table 1). There were no substantial differences between the two groups with respect to the stage of disease, type of insurance, number of hospitalizations in the 12 months before the diagnosis, or the Romano–Charlson comorbidity index. Black patients were slightly younger and somewhat more likely to be men. The most important disparity between the two groups was that black patients were substantially more likely to reside in a ZIP Code area with a low median income. Also, the distribution of patients among the SEER areas differed between the two groups.

TABLE 1. CHARACTERISTICS OF BLACK AND WHITE MEDICARE BENEFICIARIES 65 YEARS OF AGE OR OLDER WITH STAGE I OR II NON–SMALL-CELL LUNG CANCER, 1986 TO 1993.*

CHARACTERISTIC	BLACK PATIENTS	WHITE PATIENTS
	no. (%)	
All participants		
Total no.	860	10,124
Age (yr)		
65–69	376 (44)	3,502 (35)
70–74	280 (33)	3,261 (32)
≥75	204 (24)	3,361 (33)
Sex		
Male	583 (68)	6,264 (62)
Female	277 (32)	3,860 (38)
Stage of disease		
I	682 (79)	8,003 (79)
II	178 (21)	2,121 (21)
Median income in ZIP Code of residence		
Lowest quartile	451 (52)	1,907 (19)
Highest three quartiles	289 (34)	6,914 (68)
Not determined	120 (14)	1,303 (13)
SEER area†		
Atlanta	122 (14)	730 (7)
Connecticut	69 (8)	1,662 (16)
Detroit	375 (44)	1,792 (18)
Los Angeles County	85 (10)	589 (6)
San Francisco–Oakland–San Jose	165 (19)	1,595 (16)
Type of Medicare insurance		
Health maintenance organization	75 (9)	961 (9)
Indemnity	780 (91)	9,112 (90)
Not determined	5 (<1)	51 (<1)
Participants ≥66 yr with indemnity insurance		
Total no.	712	8,479
Total no. of hospitalizations in previous year		
0	520 (73)	6,455 (76)
1	133 (19)	1,446 (17)
2	41 (6)	368 (4)
>2	18 (3)	210 (2)
Highest Romano–Charlson index in previous year‡		
Not evaluated§	520 (73)	6,455 (76)
0	67 (9)	697 (8)
1	72 (10)	801 (9)
>1	53 (7)	526 (6)

*Because of rounding, all percentages do not total 100.

†SEER denotes the Surveillance, Epidemiology, and End Results program. Only the patients from the areas that contributed more than 5 percent of the black cohort are listed.

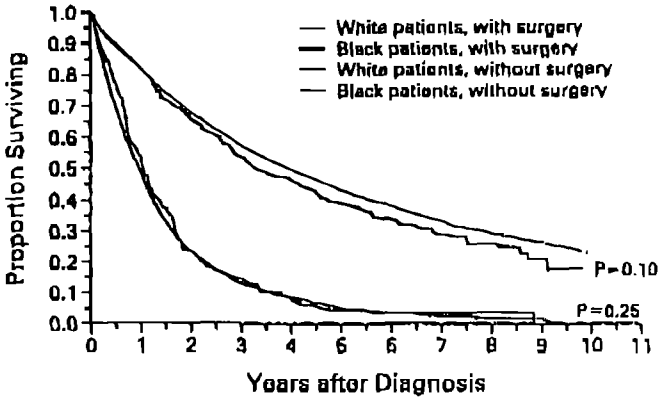
‡The Romano–Charlson index was calculated only for the patients who were hospitalized in the 12-month period before the diagnosis.

§These participants constitute the cohort for which comorbidity scores could not be calculated.

Resection Rates and Association with Survival

Black patients and white patients who underwent surgery had roughly similar rates of survival at five years — 39.1 percent among black patients and 42.9 percent among whites (P=0.10) (Fig. 1). Those who did not undergo surgery also had similar five-year survival rates (4 percent among blacks and 5 percent among whites, P=0.25) (Fig. 1). However, 76.7 percent of the white patients underwent surgery, whereas only 64.0 percent of the black patients received this treatment (P<0.001) (Table 2). The combination of discrepant resection rates and similar survival rates after treatment contributed to a substantial difference in the overall survival rates, as shown in Figure 2.

We diagrammed the effect of these results in a hypothetical cohort of 1000 white patients and 1000 black patients (Fig. 3): 76.7 percent of the whites underwent surgery, and 42.9 percent of these patients survived for five years, whereas only 5.2 percent of the remaining 23.3 percent of patients who did not receive surgical treatment survived for that long. Thus, overall, 341 patients (34.1 percent) were alive at five years. In contrast, of the 1000 black patients, only 264 patients were alive at five years — 77 (7.7 percent) fewer than in the white cohort. Two factors are responsible for this difference: the lower rate of resection among blacks (64.0 percent, vs. 76.7 percent among whites) and the slightly (though nonsignificantly)



No. of Patients at Risk						
White, surgery	7763	4495	2266	1069	407	12
Black, surgery	660	301	145	69	30	0
White, no surgery	2361	458	110	30	6	0
Black, no surgery	310	60	14	2	1	0

Figure 1. Survival of Medicare Beneficiaries 65 Years of Age or Older Who Were Given a Diagnosis of Stage I or II Non–Small-Cell Lung Cancer between 1985 and 1993, According to Treatment and Race.

lower five-year survival rate after surgery among blacks (39.1 percent vs. 42.9 percent). If black patients had undergone surgery at a rate similar to that for white patients, we estimate that 308 black patients would have been alive at five years, a number only 3.3 percent lower than that for whites. These figures suggest that of the 77 more deaths per 1000 black patients, the majority (44) can be attributed to the failure to provide surgical treatment for a curable disease.

Stratified and Adjusted Analyses

We performed a number of stratified and adjusted analyses to test the robustness of these results. The pivotal disparity in rates of resection was evaluated in several important subgroups (Table 2). The results show that the lower resection rate among black patients was consistent. In addition, we found no evidence that the disparity in resection rates differed according to the health care service area ($P=0.85$) or SEER area ($P=0.64$) or that the overall resection rate or the disparity in resection rates varied during the years of the study ($P=0.62$) (data not shown).

The disparity also persisted in two multivariable logistic-regression analyses in which we controlled for age, sex, stage of disease, median income in the ZIP Code of residence, and coexisting illness, as measured by either the Romano–Charlson index or the number of hospitalizations in the previous year. On the basis of these analyses, the odds ratios for undergoing surgery among black patients, as compared with white patients, were 0.54 when the Romano–Charlson index was used as a measure of coexisting illness and 0.53 when the number of hospitalizations was used — findings that were consistent with the unadjusted odds ratio of 0.52. The results of all the analyses support the hypothesis that race is an important independent factor in determining the likelihood that a patient with early-stage, non–small-cell lung cancer will receive surgical treatment.

The observed similarities in survival among black patients and white patients after either receiving or not receiving surgical treatment were also evaluated in analyses adjusted for factors previously identified as affecting survival. These analyses showed a slightly increased risk of death among black patients after surgery (relative risk, 1.10; $P=0.18$) and a slightly decreased risk of death for black patients who did not undergo surgery (relative risk, 0.84; $P=0.02$) (Table 3). The analyses also confirmed that in this cohort, residence in an area with a lower median income, male sex, older age, a higher stage of disease, and more coexisting illness all conferred an increased risk of death, regardless of treatment.

DISCUSSION

The optimal treatment for early-stage, non–small-cell lung cancer is surgical resection — a treatment with a substantial cure rate.[9,18,19] In this study, we determined whether the rate of surgical treatment for stage I or stage II non–small-cell lung cancer was lower for black patients 65 years of age or older than it was for white patients in the same age group. Then we compared the survival rates between black patients and white patients who had undergone surgery and between black patients and white patients who had not undergone surgery. Using several analytic techniques to control for the confounding effects of disease stage, type of insurance coverage, avail-

TABLE 2. RATE OF RESECTION AND RELATIVE RISK ACCORDING TO RACE.

VARIABLE	NO. OF PATIENTS	RESECTION RATE (%)		RELATIVE RISK (95% CI)*	P VALUE
		BLACK PATIENTS	WHITE PATIENTS		
Total	10,984	64.0	76.7	0.83 (0.79–0.88)	<0.001
Age (yr)					
65–69	3,878	73.7	85.4	0.86 (0.81–0.92)	<0.001
70–74	3,541	64.3	80.2	0.80 (0.73–0.88)	<0.001
≥75	3,565	45.6	64.2	0.71 (0.61–0.83)	<0.001
Sex					
Male	6,847	64.8	76.7	0.85 (0.80–0.90)	<0.001
Female	4,137	62.1	76.6	0.81 (0.74–0.89)	<0.001
Stage of disease					
I	8,685	64.1	77.0	0.83 (0.79–0.88)	<0.001
II	2,299	63.5	75.5	0.84 (0.75–0.94)	<0.001
Median income in ZIP Code of residence					
Lowest quartile	2,358	61.9	70.7	0.88 (0.81–0.95)	<0.001
Highest three quartiles	7,203	67.5	78.0	0.87 (0.80–0.94)	<0.001
Not determined	1,423	63.3	78.2	0.81 (0.71–0.93)	<0.001
SEER area†					
Atlanta	852	55.7	70.4	0.79 (0.67–0.93)	<0.001
Connecticut	1,731	69.6	79.5	0.88 (0.75–1.02)	0.05
Detroit	2,167	59.2	73.1	0.81 (0.74–0.89)	<0.001
Los Angeles County	674	65.9	79.3	0.83 (0.71–0.97)	0.006
San Francisco–Oakland–San Jose	1,760	74.6	79.9	0.93 (0.85–1.02)	0.10
Type of Medicare insurance‡					
Health maintenance organization	1,036	70.7	76.3	0.93 (0.80–1.08)	0.27
Indemnity	9,892	63.6	76.7	0.83 (0.78–0.87)	<0.001
Comorbidity§					
No. of hospitalizations in previous year					
0	6,975	64.0	77.6	0.83 (0.77–0.88)	<0.001
1	1,579	59.4	72.3	0.82 (0.71–0.95)	0.002
2	409	56.1	70.7	0.79 (0.60–1.05)	0.06
>2	228	50.0	56.2	0.89 (0.55–1.43)	0.61
Highest Romano–Charlson index in previous year¶					
0	764	59.7	81.6	0.73 (0.60–0.89)	<0.001
1	873	58.3	67.3	0.87 (0.71–1.06)	<0.12
>1	579	54.7	60.1	0.91 (0.71–1.18)	0.45

*Relative risks are of undergoing surgical resection for black patients as compared with white patients. CI denotes confidence interval.

†SEER denotes the Surveillance, Epidemiology, and End Results program. Only data from the areas that contributed more than 5 percent of the black cohort are listed.

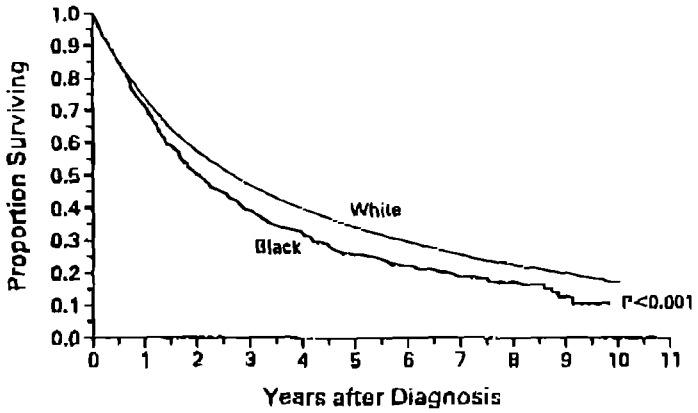
‡Data were missing for 5 black patients and 51 white patients.

§This category includes only the patients who were 66 years of age or older and who had indemnity insurance coverage at the time of diagnosis.

¶The Romano–Charlson index was calculated only for the patients who were hospitalized in the 12-month period before the diagnosis.

ability of care, socioeconomic status, age, and coexisting illnesses, we found that black patients were less likely than white patients to undergo surgical resection (a difference of 12.7 percentage points). Both unadjusted and adjusted analyses showed that black patients who underwent surgical resection had a five-year survival rate similar to that of white patients who underwent resection, and we estimated that of the 77 more deaths per 1000 black patients, the majority (44) could be attributed to the lack of surgical treatment.

If black patients were to undergo surgery at a rate equal to that of white patients, their survival rate would probably be substantially improved and would approach that of white patients. Given equal rates of resection, we estimate that there would be a 3.3 percent discrepancy in survival at five years (341 survivors among 1000 white patients vs. 308 among 1000 black patients). The survival curves shown in Figure 2 for black patients and white patients after surgery suggest a similar conclusion: given equal treatment, black patients will have a survival rate that is only marginally lower than that for white patients. The small disparity in survival between black patients and white patients with equal resection rates is not surprising, even if surgery confers an equal benefit in each group.



No. of Patients at Risk						
White patients	10,124	4953	2385	1099	413	12
Black patients	860	361	159	71	31	0

Figure 2. Survival of Medicare Beneficiaries 65 Years of Age or Older Who Were Given a Diagnosis of Stage I or II Non-Small-Cell Lung Cancer between 1985 and 1993, According to Race.

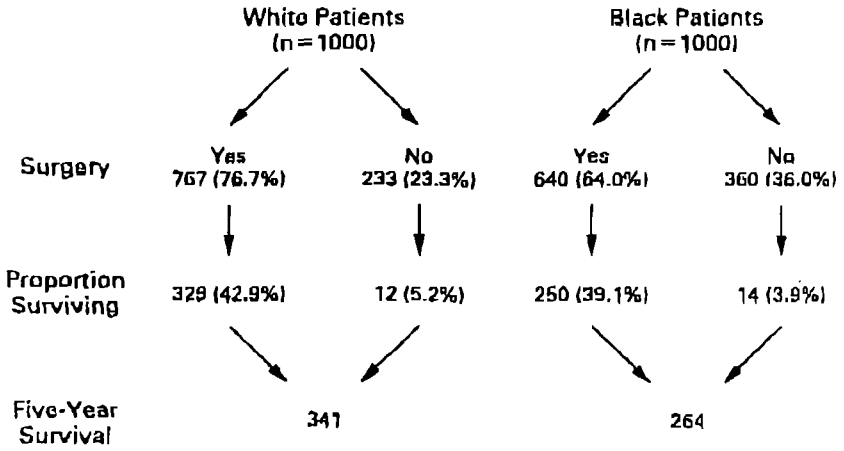


Figure 3. Relation between the Rate of Surgical Resection for Stage I or II Non-Small-Cell Lung Cancer and Five-Year Survival in Hypothetical Cohorts of 1000 Black and 1000 White Medicare Beneficiaries 65 Years of Age or Older.

If 76.7 percent of the black patients had undergone surgery, 308 of them would be expected to be alive five years after diagnosis.

The actuarial data (deaths due to all causes) in the same population show a larger gap: on average, a 73-year-old black person has a 76 percent likelihood of survival for five years, as compared with 81 percent for a 73-year-old white person.[30]

These results should be viewed with caution. We focused on Medicare beneficiaries who were 65 years of age or older, and it is not clear whether there is similar variability in the care provided to younger patients with lung cancer. In addition, in all the patients in our study, the diagnosis of non-small-cell lung cancer and the stage of disease had been established, which meant that all the patients had had extensive involvement with the health care system. Our study did not address the care received by patients who present with advanced disease or those in whom the stage of disease has not been determined. Two other factors that we did not investigate also increase mortality due to non-small-cell lung cancer in black persons. The annual incidence of non-small-cell lung cancer in this population of people who are 65 years of age or older is higher among black persons (359

TABLE 3. EFFECT OF RACE AND OTHER FACTORS ON SURVIVAL AMONG PATIENTS WHO UNDERWENT SURGERY AND THOSE WHO DID NOT.

FACTOR	RELATIVE RISK OF DEATH			
	PATIENTS UNDERGOING SURGERY	P VALUE	PATIENTS NOT UNDERGOING SURGERY	P VALUE
Race				
White*	1.00		1.00	
Black	1.10	0.18	0.84	0.02
Income				
Highest three quartiles*	1.00		1.00	
Lowest quartile	1.19	<0.05	1.15	0.007
Sex				
Female*	1.00		1.00	
Male	1.44	<0.001	1.21	<0.001
Age				
65–69 yr*	1.00		1.00	
70–74 yr	1.17	<0.001	1.10	0.17
≥75 yr	1.46	<0.001	1.20	0.004
Stage of disease				
I*	1.00		1.00	
II	1.98	<0.001	1.35	<0.001
Romano–Charlson comorbidity index				
Not available*	1.00		1.00	
0	1.01	0.84	1.25	0.02
1	1.23	<0.001	1.22	0.006
>1	1.49	<0.001	1.42	<0.001

*This was the reference category.

per 100,000 population) than among white persons (294 per 100,000).[21,22] Also, among persons 65 years of age or older in whom the stage of disease is determined at the time of diagnosis, the SEER data show that black patients are less likely than white patients to have resectable (i.e., stage I or II) disease (27 percent vs. 31 percent) (unpublished data).

In this study, we were also limited in our ability to make adjustments for two factors that might have influenced the interpretation of our results. We used an aggregate measure of income as a surrogate for the socioeconomic status of each patient. Some investigators have argued that our aggregate measure is an adequate surrogate marker for socioeconomic status,[23] but others have argued that the optimal socioeconomic variable is at the level of the patient, not at the level of the community.[24] Therefore, we cannot be sure that we have separated the effects of race from those of socioeconomic status.

In addition, we could not ascertain the Romano–Charlson comorbidity index for the 76 percent of our patients who were not hospitalized in the year before the diagnosis. However, it seems unlikely that this lack has led us to make incorrect conclusions, for three reasons. First, in the 24 percent of patients in whom we could evaluate coexisting illness in terms of the Romano–Charlson comorbidity index, the disparity in treatment was consistent. Second, most clinicians would agree that, barring the presence of severe pulmonary disease, a patient who had not required hospitalization for a year could probably tolerate a thoracotomy and partial lung resection.[25] Third, we can predict that the bias we may have introduced by using this measure of coexisting illness would, if anything, have led us to underestimate the disparity in treatment between black and white patients. Specifically, for chronic diseases that are responsive to outpatient management, such as chronic obstructive pulmonary disease, blacks are more likely than whites to be hospitalized for the same degree of illness, thus increasing our estimate of the burden of coexisting illness among blacks.[25,26]

Variations in the care of patients with similar diseases have been observed since Wennberg and Gittelsohn first called attention to the phenomenon in 1973.[27] Unlike the treatments under scrutiny in many other studies, the optimal strategy for the treatment of early-stage, non–small-cell lung cancer is unambiguous: surgical resection confers a meaningful probability of cure, whereas other therapies do not. We cannot determine from our data why black patients have a lower rate of resection than their white counterparts, but we can conclude that the difference in treatment has a substantial effect on survival. Others have argued that the preferences of black patients may differ from those of white patients or that black patients may weigh the risks of surgical therapy differently.[28,29] An alternative explanation is that black patients are offered optimal treatment less frequently than their white counterparts.[30] These are certainly issues worthy of investigation in future studies.

We are indebted to the Applied Research Branch, Division of Cancer Prevention and Population Science, National Cancer Institute; to the Office of Information Services and the Office of Strategic Planning, Health Care Financing Administration; to Information Management Services; and to the SEER program. The interpretation and reporting of the data from the linked SEER–Medicare data base are the sole responsibility of the authors.

REFERENCES

1. Lin AY, Ihde DC. Recent developments in the treatment of lung cancer. JAMA 1992;267:1661-4.
2. Greenwald HP, Polissar NL, Borgatta EF, McCorkle R, Goodman G. Social factors, treatment, and survival in early-stage non-small cell lung cancer. Am J Public Health 1998;88:1681-4.
3. Smith TJ, Penberthy L, Desch CE, et al. Differences in initial treatment patterns and outcomes of lung cancer in the elderly. Lung Cancer 1995; 13:235-52.
4. Samet JM, Hunt WC, Key CR, Humble CG, Goodwin JS. Choice of cancer therapy varies with age of patient. JAMA 1986;255:3385-90.
5. Riley GF, Potosky AL, Klabunde CN, Warren JL, Ballard-Barbash R. Stage at diagnosis and treatment patterns among older women with breast cancer: an HMO and fee-for-service comparison. JAMA 1999;281:720-6.
6. Begg CB, Cramer LD, Hoskins WJ, Brennan MF. Impact of hospital volume on operative mortality for major cancer surgery. JAMA 1998;280: 1747-51.
7. Potosky AL, Riley GF, Lubitz JD, Mentnech RM, Kessler LG. Potential for cancer related health services research using a linked Medicare-tumor registry database. Med Care 1993;31:732-48.
8. Percy C, Van Holten V, Muir C, eds. International classification of

diseases for oncology. 2nd ed. Geneva: World Health Organization, 1990.
9. Ettinger DS, Cox JD, Ginsberg RJ, et al. NCCN Non-Small Cell Lung Cancer Practice Guidelines. Oncology 1996;10:Suppl:S81-S111.
10. Mountain CF. A new international staging system for lung cancer. Chest 1986;89:Suppl:225S-233S.
11. *Idem*. Revisions in the International System for Staging Lung Cancer. Chest 1997;111:1710-7.
12. Romano PS, Roos LL, Jollis JG. Adapting a clinical comorbidity index for use with ICD-9-CM administrative data: differing perspectives. J Clin Epidemiol 1993;46:1075-9.
13. Charlson ME, Pompei P, Ales KL, MacKenzie CR. A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. J Chronic Dis 1987;40:373-83.
14. Hammond JR. Substate district, HSA, and PSRO area designations. Am J Public Health 1976;66:788-90.
15. Ballard-Barbash R, Potosky AL, Harlan LC, Nayfield SG, Kessler LG. Factors associated with surgical and radiation therapy for early stage breast cancer in older women. J Natl Cancer Inst 1996;88:716-26.
16. Schlesselman JJ, Stolley PD. Case-control studies: design, conduct, analysis. New York: Oxford University Press, 1982.
17. Collett D. Modelling survival data in medical research. London: Chapman & Hall, 1994.
18. Shields TW. Surgical therapy for carcinoma of the lung. Clin Chest Med 1993;14:121-47.
19. Lam WK. Management of non-small cell lung cancer according to staging — an update. Respirology 1998;3:51-4.
20. National Center for Health Statistics. U.S. decennial life tables for 1989-1991. Vol. 1, No. 1. Washington, D.C.: Government Printing Office, 1997.
21. Ries LAG, Kosary CL, Hankey BF, Miller BA, Harras A, Edwards BK, eds. SEER cancer statistics review: 1973-1994. Bethesda, Md.: National Cancer Institute, 1997. (NIH publication no. 97-2789.)
22. Wingo PA, Ries LAG, Giovino GA, et al. Annual report to the nation on the status of cancer, 1973-1996, with a special section on lung cancer and tobacco smoking. J Natl Cancer Inst 1999;91:675-90.
23. Krieger N. Overcoming the absence of socioeconomic data in medical records: validation and application of census-based methodology. Am J Public Health 1992;82:703-10.
24. Dale W, Vijayakumar S, Lawlor EF, Merrell K. Prostate cancer, race, and socioeconomic status: inadequate adjustment for social factors in assessing racial differences. Prostate 1996;29:271-81.
25. Gillum RF. Chronic obstructive pulmonary disease in blacks and whites: mortality and morbidity. J Natl Med Assoc 1990;82:417-28.
26. Culler SD, Parchman ML, Przybylski M. Factors related to potentially preventable hospitalizations among the elderly. Med Care 1998;36:804-17.
27. Wennberg J, Gittelsohn A. Small area variations in health care delivery. Science 1973;182:1102-8.
28. McNeil BJ, Weichselbaum R, Pauker SG. Fallacy of the five-year survival in lung cancer. N Engl J Med 1978;299:1397-401.
29. Aday LA. Economic and noneconomic barriers to the use of needed medical services. Med Care 1975;13:447-56.
30. Schulman KA, Berlin JA, Harless W, et al. The effect of race and sex on physicians' recommendations for cardiac catheterization. N Engl J Med 1999;340:618-26.

REFERENCES

1. Fanaroff AA, Wright LL, Stevenson DK, et al. Very-low-birth-weight outcomes of the National Institute of Child Health and Human Development Neonatal Research Network, May 1991 through December 1992. Am J Obstet Gynecol 1995;173:1423-31.
2. Hack M, Fanaroff AA. Outcomes of children of extremely low birthweight and gestational age in the 1990's. Early Hum Dev 1999;53:193-218.
3. Piecuch RE, Leonard CH, Cooper BA, Sehring SA. Outcome of extremely low birth weight infants (500 to 999 grams) over a 12-year period. Pediatrics 1997;100:633-9.
4. Kuban K, Sanocka U, Leviton A, et al. White matter disorders of prematurity: association with intraventricular hemorrhage and ventriculomegaly. J Pediatr 1999;134:539-46.
5. Perlman JM. White matter injury in the preterm infant: an important determination of abnormal neurodevelopment outcome. Early Hum Dev 1998;53:99-120.
6. Inder T, Huppi PS, Zientara GP, et al. Early detection of periventricular leukomalacia by diffusion-weighted magnetic resonance imaging techniques. J Pediatr 1999;134:631-4.
7. Baud O, Foix-L'Helias L, Kaminski M, et al. Antenatal glucocorticoid treatment and cystic periventricular leukomalacia in very premature infants. N Engl J Med 1999;341:1190-6.
8. Dammann O, Leviton A. Maternal intrauterine infection, cytokines, and brain damage in the preterm newborn. Pediatr Res 1997;42:1-8.
9. Yoon BH, Jun JK, Romero R, et al. Amniotic fluid inflammatory cytokines (interleukin-6, interleukin-1 beta, and tumor necrosis factor-alpha), neonatal brain white matter lesions, and cerebral palsy. Am J Obstet Gynecol 1997;177:19-26.
10. Wright LL, Verter J, Younes N, et al. Antenatal corticosteroid administration and neonatal outcome in very low birth weight infants: the NICHD Neonatal Research Network. Am J Obstet Gynecol 1995;173:269-74.

Racial Disparity in Rates of Surgery for Lung Cancer

LUNG cancer is the leading cause of death from cancer in the United States, accounting for more deaths per year than cancers of the breast, colon, prostate, and cervix combined. Blacks have a higher incidence of and death rate from lung cancer than whites. The incidence rates differ significantly among men (122 per 100,000 population for blacks, as compared with 78 per 100,000 for whites), whereas the rates among black women and white women are similar. Overall, the five-year survival rate for lung cancer is 14 percent among whites and 11 percent among blacks.

Some of the difference in the incidence of lung cancer can be explained. Cigarette smoking, the predominant risk factor, accounts for 80 to 90 percent of all cases. The risk is related to the number of cigarettes smoked, the age at which smoking began, and the duration of smoking.[1] Black men have higher rates of cigarette smoking than white men (34 percent vs. 28 percent), whereas black women have lower rates than white women (22 percent vs. 25 percent). Women may be at greater risk for lung cancer than men at a given level of smoking. Tobacco companies have targeted blacks, especially teenagers, with aggressive advertising and promotion. During this decade, the prevalence of smoking increased by 80 percent among black high-school students (from 13 percent to 23 percent), with the most dramatic increase occurring among young black men — from 14 percent to 28 percent. Unfortunately, exposure of blacks to other respiratory carcinogens (particularly occupational exposure, air pollution, and dietary factors) has not been adequately studied.

The reasons for the higher death rate among blacks with lung cancer are more complex.[2] Most of the blame has been placed on health-related behavior, socioeconomic status, or lack of access to medical care. However, studies suggest that these factors account for only a portion of the inequalities in morbidity and mortality.[2] Therefore, other explanations should be sought. Blacks smoke fewer cigarettes than whites, but they tend to smoke mentholated cigarettes or ones with higher levels of nicotine and tar. Also, black smokers have higher blood levels of cotinine (the main metabolite of nicotine),[3,4] and the carcinogenic or mutagenic agents in tobacco smoke may be metabolized and excreted at different rates in blacks as compared with whites.[5,6] These differences may help explain the greater risks of both addiction to nicotine and the adverse health consequences of smoking — cancer, heart disease, and stroke — among blacks.

In this issue of the *Journal*, Bach et al.[7] present results from an observational study in which data from two large national data bases — that of the Surveillance, Epidemiology, and End Results (SEER) program and Medicare hospitalization records — were used to assess the rates of resection and survival among elderly patients (≥65 years of age) with early-stage, non–small-cell lung cancer (i.e., cancer confined to the lung or regional lymph nodes without mediastinal or other metastatic spread [stage I or stage II]). There is agreement that surgical resection saves lives in patients with early-stage, non–small-cell lung cancer. After accounting for the confounding effects of sex, coexisting illness, socioeconomic status, insurance coverage, and availability of care, the study showed that black patients, once lung cancer had been diagnosed and staged, were 12.7 percent less likely than white patients to undergo surgical resection. Blacks also had a lower five-year survival rate than whites. The authors concluded that if blacks were to undergo surgery at the same rate as whites, the survival rate among blacks would be substantially improved and almost equal to that among whites.

What are the implications of this study? The findings of this study and others[8] suggest that there is a difference in how physicians manage cancer that is based on a patient's race, regardless of other attributes, and that the consequence of these lapses in care is reduced survival among blacks. Evidence that bias on the part of physicians (either overt prejudice or subconscious perceptions) influences access to op-

timal cancer care is disheartening, because we all believe that if our loved ones get cancer, they will receive the best care available. We do not presume to know whether bias is truly at work in this setting, but we must strive to remove any barrier preventing blacks from using the health care system for the prevention, diagnosis, and treatment of cancer.

Many physicians either do not know or fail to adhere to established standards for the diagnosis and staging of lung cancer.[1] An alarming 35.4 percent of the patients in the study by Bach et al. were excluded from the analysis because of inadequate documentation of the tumor stage — a crucial step in the formulation of treatment recommendations.[7] This finding should be the focus of future investigation, since it underscores the effect of poor pretreatment evaluations.

Racial differences between physicians and patients are often barriers to optimal patient–physician communication and partnership.[9] Black patients are more likely than whites to feel excluded from decisions affecting their health, and this feeling may be an important factor contributing to miscommunication, increased suspicion of the health care system, and concern about mistreatment. Failure to address the very real issues of cross-cultural communication and variations in beliefs about health threatens patients' satisfaction and clinical outcomes. Recent initiatives at medical schools to teach "professionalism" and "cultural competence" should be lauded and expanded.[10,11]

Both black patients and white patients appear more likely to feel involved with their own care when their doctors are of the same race.[9] However, black patients are far less likely to have a black physician as part of their care team. Although blacks make up 12 percent of the U.S. population, only 4 percent of physicians are black. Despite their low numbers, black physicians have a unique and important role in the care provided to poor or minority communities.[12] Consequently, the dismantling of programs designed to encourage members of minority groups to enter the health profession threatens the health of blacks and other minority groups.[12]

The lack of preventive services and appropriate cancer-screening tests is a known weakness of the American health care system. Despite the fact that tobacco use is the most costly and deadly cause of preventable disease, graduates of U.S. medical schools are not adequately trained to treat nicotine dependence.[13] For lung cancer, as compared with other common cancers, there is no regular screening test to enhance early detection and reduce mortality.[1] In a recent study of spiral computed tomographic scanning as a screening procedure, early lung cancer was detected in 2.7 percent of 1000 subjects with a history of at least 10 pack-years of smoking, which compares favorably with the rate of detection of prostate cancer with screening for prostate-specific antigen.[14] This exciting finding may spur a resurgence of early screening initiatives.

More effective screening will make surgical resection for early-stage lung cancer more important, and any racial disparity in resection rates, if not corrected, will be even more glaring. Many blacks do not undergo preventive screening for cancer, because their physicians do not recommend the tests.[2] Should effective screening for lung cancer become available, we will need large-scale public health initiatives to make black patients, and their physicians, aware of its importance. Finally, since patients without medical insurance and those with low incomes undergo screening and needed surgery less often than other patients, we need to ensure universal access to appropriate care.

Most of the knowledge about the best treatment for patients with lung cancer has and will come from large, properly conducted clinical trials. Unfortunately, many blacks are reluctant to enroll in clinical trials — the aftermath of several shameful episodes in the history of U.S. research. President Bill Clinton's formal apology to the remaining survivors of the Tuskegee Study of Untreated Syphilis was more than symbolic — it was a start toward the rebuilding of trust.[15] Physicians making treatment recommendations to black patients must be sensitive to this issue. Also, agencies that fund research on cancer should devote more resources to remedying the disproportionate effect of cancer on minority groups and the medically underserved.[8] They should also ensure adequate representation of racial and ethnic minority groups in cancer studies, increase the number of persons from minority groups who perform cancer research and participate in the setting of research priorities, and increase efforts to attract investigators from minority groups to work on cancer issues and serve on advisory panels.[8] It is important to note that research on lung cancer remains grossly underfunded (at a level estimated to be $800 per death, as compared with $30,000 per death from AIDS and $10,000 per death from breast cancer).

Preventing lung cancer is easier than curing it, and survival is better if the cancer is diagnosed early in an asymptomatic patient and treated with surgical resection. If the poor statistics on survival for the leading cause of cancer deaths in the United States are partially due to racial discrimination that results in an inadequate emphasis on prevention or insufficiently aggressive care for blacks, then the medical establishment begins to share a portion of the tobacco industry's culpability for the dismal outcome of patients with this disease. Like a time bomb, lung cancer should be rapidly evaluated and defused. Every educational, social, political, and legal effort should be made to ensure that all patients with lung cancer receive high-quality care — appropriate services delivered in a technically competent manner, with

good communication, shared decision making, and cultural sensitivity.[1]

TALMADGE E. KING, JR., M.D.
PAUL BRUNETTA, M.D.
University of California, San Francisco
San Francisco, CA 94143

REFERENCES

1. The American Thoracic Society, European Respiratory Society. Pretreatment evaluation of non-small-cell lung cancer. Am J Respir Crit Care Med 1997;156:320-32.
2. Hewitt M, Simone JV. Ensuring quality cancer care. Washington, D.C.: National Academy Press, 1992.
3. Wagenknecht LE, Cutter GR, Haley NJ, et al. Racial differences in serum cotinine levels among smokers in the Coronary Artery Risk Development (Young) Adults study. Am J Public Health 1990;80:1053-6.
4. Caraballo RS, Giovino GA, Pechacek TF, et al. Racial and ethnic differences in serum cotinine levels of cigarette smokers: Third National Health and Nutrition Examination Survey, 1988-1991. JAMA 1998;280:135-9.
5. Pérez-Stable EJ, Herrera B, Jacob P III, Benowitz NL. Nicotine metabolism and intake in black and white smokers. JAMA 1998;280:152-6.
6. Richie JP Jr, Carmella SG, Muscat JE, Scott DG, Akerkar SA, Hecht SS. Differences in the urinary metabolites of the tobacco-specific lung carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone in black and white smokers. Cancer Epidemiol Biomarkers Prev 1997;6:783-90.
7. Bach PB, Cramer LD, Warren JL, Begg CB. Racial differences in the treatment of early-stage lung cancer. N Engl J Med 1999;341:1198-205.
8. Haynes MA, Smedley BD, eds. The unequal burden of cancer: an assessment of NIH research and programs for ethnic minorities and the medically underserved. Washington, D.C.: National Academy Press, 1999.
9. Cooper-Patrick L, Gallo JJ, Gonzales JJ, et al. Race, gender, and partnership in the patient-physician relationship. JAMA 1999;282:583-9.
10. Swick HM, Szenas P, Danoff D, Whitcomb ME. Teaching professionalism in undergraduate medical education. JAMA 1999;282:830-2.
11. Loudon RF, Anderson PM, Gill PS, Greenfield SM. Educating medical students for work in culturally diverse societies. JAMA 1999;282:875-80.
12. Komaromy M, Grumbach K, Drake M, et al. The role of black and Hispanic physicians in providing health care for underserved populations. N Engl J Med 1996;334:1305-10.
13. Perry LH, Grissino LM, Runfola PS. Tobacco dependence curricula in US undergraduate medical education. JAMA 1999;282:825-9.
14. Henschke CI, McCauley DI, Yankelevitz DF, et al. Early Lung Cancer Action Project: overall design and findings from baseline screening. Lancet 1999;354:99-105.
15. Corbie-Smith G. The continuing legacy of the Tuskegee Syphilis Study: considerations for clinical investigation. Am J Med Sci 1999;317:5-8.

News Release

EMBARGOED FOR RELEASE UNTIL:
October 14, 1999

Contact: Jennifer Morales (202) 347-5270
Missy Krasner (650) 854-9400

NEW SURVEY FINDS MOST AMERICANS UNAWARE OF LONG-STANDING BLACK-WHITE GAPS IN HEALTH STATUS

Whites and Minority Americans Differ in Perceptions of Minority Health

African Americans and Latinos Say Race Matters, but More Are Concerned with The Cost of Coverage and Care

Washington, DC --After years of official reports of poorer health outcomes for African Americans and substantial media attention to the issue, most Americans—and most African Americans—remain unaware that blacks fare worse on key health measures, such as infant mortality and life expectancy, according to a new national survey released today by the Kaiser Family Foundation at a forum in Washington, DC. And at a time when the problem of the uninsured is back in the news, more African Americans and Latinos cite the cost of health insurance and medical care than their race or ethnic background as a major problem they face in health care.

Lack of Awareness in Health Gaps Between African Americans & Whites

A majority of white Americans (54%) are not aware that infant mortality is higher for black infants than for white (39% think it is the same; 6% better; and 9% don't know). Strikingly, 58% of African Americans have the same misperception (42% think black infant mortality is the same as white; 8% think it is better; and 8% don't know). Majorities of white and African Americans also have the same misperceptions about life expectancy. Fifty seven percent (57%) of whites are unaware that life expectancy is shorter for blacks (43% think it is the same; 5% better, and 9% don't know), and 53% of African Americans are unaware (36% think it is the same; 10% think it is better; and 7% don't know). [In 1997, black infant mortality was 2 ½ times higher than white (14.2 per 1,000 black infants born versus 6.0 per 1,000 white infants born), and blacks in 1996, on average, lived 6.6 years less than whites.]

"There is no single cause of racial disparities in health, and there's no single solution, but there is no doubt that greater public awareness is needed if we are going to have an impact on this problem," said Drew E. Altman, Ph.D., president of the Kaiser Family Foundation which conducted the survey.

The survey also shows that the majority of African Americans believe there are differences in access to health care between whites and African Americans, but the majority of whites perceive no differences. For example, 67% of whites believe African Americans are "just as well or better off than the average white person when it comes to getting routine medical care when they need it," while 51% of African Americans believe blacks are worse off. Over half (56%) of African Americans surveyed believe that African Americans with heart disease are less likely than whites with heart disease to get specialized medical procedures and surgery. By contrast, 33% of whites believed that African Americans with heart disease are less likely than whites to get that care. Similarly, 64% of African Americans believe that they are less likely than whites to get the newest medicines and treatments for HIV-AIDS, compared to 43% of whites who believe that African Americans are less likely to get that care.

When asked about problems African Americans face in the health care system, many blacks (40%) cited having difficulty getting care because of race or ethnic background as a "major problem," but more (45%) cited "having enough doctors or other health care providers near where they live" and an overwhelming majority (71%) cited "being able to afford the cost of insurance and necessary medical care" as a major problem.

African Americans and Latinos Lack Confidence in the Health Care System

The survey also reveals that minority groups also have concerns that the quality of care they receive is lower than that provided to whites. Sixty-four percent of African Americans and 56% of Latinos believe they receive lower-quality health care than whites. By contrast, 67% of whites believe that African Americans receive the same quality care they do, and 59% believe Latinos receive the same quality of care.

Perceptions of the quality of health care may stem, in part, from personal experiences. When asked if they have felt they have been judged unfairly or treated with disrespect because of their race or ethnic background, only 1% of whites said they have had this experience, with 12% of African Americans and 15% of Latinos reporting such an experience. While only 1% of whites said they have been judged unfairly or treated with disrespect because of how well they speak English, 14% of Latinos say they have been poorly treated because of a language barrier.

When asked about direct personal experience with racism in health care, 35% of African Americans and 36% of Latinos responded that they, a family member or friend had been treated unfairly specifically because of their race or ethnicity when seeking medical care. In contrast, only 15% of whites indicated that they, a family member or friend had such an experience.

"This survey shows that neither efforts to improve financing or efforts to prevent racial discrimination alone will improve health access for minority groups. Both race and money matter," said Marsha Lillie-Blanton, Dr.P.H., Vice President, the Kaiser Family Foundation.

The survey is being released at a forum on Race, Ethnicity and Medical Care in Washington, DC, convened by the Kaiser Family Foundation. The forum will bring together leaders in health care, research and education to discuss racial disparities in care and ways to address them.

The Kaiser Family Foundation, based in Menlo Park, California, is a nonprofit, independent national health care philanthropy and is not associated with Kaiser Permanente or Kaiser Industries.

Copies of the survey toplines (publication #1529) and chartpack (#1528) are available online at www.kff.org, or by calling the Foundation's publications request line at (800) 656-4533.

Methodology

The Kaiser Family Foundation Survey of Race, Ethnicity and Medical Care: Public Perceptions and Experiences is based on a national random sample of 3,884 telephone interviews with adults age 18 and over including 1,479 whites, 1,189 African Americans and 983 Latinos. Interviews were completed both in English and Spanish according to the preferences of the respondent. The survey was designed and analyzed by researchers at the Foundation, and conducted by Princeton Survey Research Associates between July 7 and September 19, 1999. The margin of error is +/-3% for results based on the full sample, +/-4% for the subsample of whites, +/-4% for African Americans and +/-6% for Latinos. (Margin of error is large for smaller subsamples of respondents). Note that in addition to sampling error there are other possible sources of measurement error.

Briefing Note

ANALYSIS OF MINORITY HEALTH REVEALS PERSISTENT, WIDESPREAD DISPARITIES

June 1999

To order Fund publications, Please call 1-888-777-2744

For more information, Please call:

MARY MAHON
Public Information Officer
THE COMMONWEALTH FUND
TEL 212 606-3853
FAX 212 606-3500
E-MAIL mm@cmwf.org

Or

KAREN SCOTT COLLINS
Assistant Vice President
The Commonwealth Fund
TEL: 212-606-3854
E-MAIL ksc@cmwf.org

A comprehensive new Commonwealth Fund report of minority Americans' health care experiences paints a stark picture of the health status of and health care received by racial and ethnic minorities. U.S. Minority Health: A Chartbook, by Fund staff Karen Scott Collins, M.D., Allyson Hall, Ph.D., and Charlotte Neuhaus, finds that minority Americans lag behind on nearly every health indicator, including health care coverage, access to care, life expectancy, and disease rates.

The chartbook, which compares findings from several Fund surveys, national data sources, and presents Fund-sponsored research findings, also reveals that despite substantial overall improvements in Americans' health, racial and ethnic disparities persist across age, sex, and income categories. Some striking examples include the black infant mortality rate, which is twice that of all U.S. infants; a higher breast cancer mortality rate for black women than white women (even though black women have a lower incidence rate); and nearly twice as many Hispanic adults report they do not have a regular doctor compared to white adults.

Minority adults are also more likely to lack health insurance than are white adults, a consistent trend over the past decade. Nearly two of five (38%) Hispanic adults, one of four (24%) black adults, and one of four (24%) Asian-American adults are uninsured, compared with one of seven (14%) white adults.

Elderly minorities experience disparities in access to care and health status, in part because Medicare covers only about half the health care expenses of older Americans. Two of five Hispanic and two of five black Americans age 65 and older rate their health status as fair or poor, compared with less than one of four (23%) white Americans 65 and over. Minority Americans 65 and older are less likely to have a regular doctor or to see a specialist.

Noticeable improvement, however, is evident on some measures. For example, the rate of black women receiving mammograms and Pap tests has increased.

Minorities are also underrepresented in medical education and in the health care delivery system. Although blacks, Hispanics, and Native Americans make up 24 percent of the U.S. population, only seven percent of physicians, five percent of dentists, and six percent of medical school faculty members are from one of these minority groups.

Facts and Figures

- Nearly two of five (39%) black adults and almost half (46%) of Hispanic adults report that they do not have a regular doctor, compared with one of four (26%) of white adults.
- Almost half (45%) of Hispanic adults, two of five (41%) Asian-American adults, and more than one of three (35%) black adults report difficulty paying for medical care, compared with one of four (26%) white adults.
- While about two-thirds (65%) of white Medicare beneficiaries were vaccinated against the flu in the past year, about four of 10 (43%) blacks received a flu shot in the past 12 months. Half (49%) of Hispanics had a flu shot in that time.

THE COMMONWEALTH FUND
ONE EAST 75TH STREET
NEW YORK, N Y 10021-2692
TEL 212 535 0400
FAX 212 606-3500
E-MAIL cmwf@cmwf.org
http://www.cmwf.org

The New England Journal of Medicine

Special Article

THE EFFECT OF RACE AND SEX ON PHYSICIANS' RECOMMENDATIONS FOR CARDIAC CATHETERIZATION

KEVIN A. SCHULMAN, M.D., JESSE A. BERLIN, SC.D., WILLIAM HARLESS, PH.D., JON F. KERNER, PH.D., SHYRL SISTRUNK, M.D., BERNARD J. GERSH, M.B., CH.B., D.PHIL., ROSS DUBÉ, CHRISTOPHER K. TALEGHANI, M.D., JENNIFER E. BURKE, M.A., M.S., SANKEY WILLIAMS, M.D., JOHN M. EISENBERG, M.D., AND JOSE J. ESCARCE, M.D., PH.D.

ABSTRACT

Background Epidemiologic studies have reported differences in the use of cardiovascular procedures according to the race and sex of the patient. Whether the differences stem from differences in the recommendations of physicians remains uncertain.

Methods We developed a computerized survey instrument to assess physicians' recommendations for managing chest pain. Actors portrayed patients with particular characteristics in scripted interviews about their symptoms. A total of 720 physicians at two national meetings of organizations of primary care physicians participated in the survey. Each physician viewed a recorded interview and was given other data about a hypothetical patient. He or she then made recommendations about that patient's care. We used multivariate logistic-regression analysis to assess the effects of the race and sex of the patients on treatment recommendations, while controlling for the physicians' assessment of the probability of coronary artery disease as well as for the age of the patient, the level of coronary risk, the type of chest pain, and the results of an exercise stress test.

Results The physicians' mean (±SD) estimates of the probability of coronary artery disease were lower for women (probability, 64.1±19.3 percent, vs. 69.2±18.2 percent for men; P<0.001), younger patients (63.8±19.5 percent for patients who were 55 years old, vs. 69.5±17.9 percent for patients who were 70 years old; P<0.001), and patients with nonanginal pain (58.3±19.0 percent, vs. 64.4±18.3 percent for patients with possible angina and 77.1±14.0 percent for those with definite angina; P<0.001). Logistic-regression analysis indicated that women (odds ratio, 0.60; 95 percent confidence interval, 0.4 to 0.9; P=0.02) and blacks (odds ratio, 0.60; 95 percent confidence interval, 0.4 to 0.9; P=0.021 were less likely to be referred for cardiac catheterization than men and whites, respectively. Analysis of race–sex interactions showed that black women were significantly less likely to be referred for catheterization than white men (odds ratio, 0.4; 95 percent confidence interval, 0.2 to 0.7; P=0.004).

Conclusions Our findings suggest that the race and sex of a patient independently influence how physicians manage chest pain. (N Engl J Med 1999; 340:618-26.)

EPIDEMIOLOGIC studies have identified differences according to race and sex in the treatment of patients with cardiovascular disease in the United States.[1-14] Some studies have found that blacks and women are less likely than whites and men, respectively, to undergo cardiac catheterization or coronary-artery bypass graft surgery when they are admitted to the hospital for treatment of chest pain or myocardial infarction.[1,5,7,8,10,11,13,14] In contrast, other studies were unable to confirm that invasive procedures are underused in women.[15,16]

Racial differences in the treatment of cardiovascular disease may be explained by financial and organizational barriers,[13] clinical differences among patients,[17] preferences of the patients,[7,8,10,12] and the amount of contact the patients have with the health care system or hospitals that offer invasive cardiovascular services.[18] Most studies that have controlled for the insurance status of patients[1,5,7,9-13] or have assessed patients already within the health care system[1-3,5,7-14] still found significant effects of race. However, one study has reported that there were no effects of race among patients with private insurance.[13]

Sex differences in the treatment of cardiovascular disease are less well established. Sex differences persist despite the poorer prognosis for women after myocardial infarction[19,20] and the higher likelihood that they will have had greater functional disability due to angina before myocardial infarction.[4] Differences in treatment may be related to a lack of research on cardiovascular disease in women,[21] differ-

From the Clinical Economics Research Unit (K.A.S., C.K.T.), the Lombardi Cancer Center (J.F.K.), the Division of General Internal Medicine (S.S.), the Division of Cardiology (B.J.G.), and the Department of Medicine (J.M.E.), Georgetown University Medical Center, Washington, D.C., the Center for Clinical Epidemiology and Biostatistics and the Department of Biostatistics and Epidemiology (J.A.B.), and the Division of General Internal Medicine (S.W.), University of Pennsylvania School of Medicine, Philadelphia, Interactive Drama, Bethesda, Md. (W.H., R.D.), and the RAND Health Program, Santa Monica, Calif. (E.B., J.E.). Address reprint requests to Dr. Schulman at the Clinical Economics Research Unit, Georgetown University Medical Center, 2233 Wisconsin Ave., NW, Suite 440, Washington, DC 20007.

William Ayers, M.D., Georgetown University Medical Center, Washington, D.C., was also an author.

ences in physicians' interpretations of women's and men's symptoms,[6] time of presentation for treatment with respect to the progression of disease,[22] or the recommendations of physicians.[23]

One question that has not been addressed directly by previous studies is the extent to which physicians are responsible for the differences in treatment recommendations with respect to race and sex. The goal of this study was to assess, in a controlled experiment, physicians' treatment recommendations for patients presenting with various types of chest pain. We hypothesized that the race and sex of the patients would influence the physicians' recommendations regarding cardiac catheterization.

METHODS

Survey Instrument

We developed a computerized survey instrument, incorporating video recorded interviews and text, to present descriptions of patients with chest pain to clinicians and to assess clinicians' decisions about how to manage such symptoms. We constructed 144 descriptions using all possible combinations of six experimental factors: race (black or white), sex, age (55 or 70 years), level of coronary risk (low or high), type of chest pain (definite angina, possible angina, or nonanginal pain), and the results of an exercise stress test with thallium (moderate inferolateral ischemia, moderate anterolateral ischemia, or multiple severe ischemic defects). In addition, each description included the same results of electrocardiography (nonspecific T-wave changes).

The survey was administered by means of a multimedia computer program developed for this study. The instrument included a video recorded interview of a patient with chest pain and was designed to assess the physicians' management recommendations and judgment of the characteristics of the patient, and to record the demographic characteristics of the physicians.

The recorded component consisted of a scripted interview with a patient. Three scripts were developed, one for each type of chest pain. Each script contained information on the presenting symptom, associated cardiac symptoms, relief of symptoms, and duration of symptoms. The scripts were reviewed by four cardiologists, who independently used established criteria to classify the features of the pain described in each interview as definite angina, possible angina, or nonanginal chest pain.[24] The rate of agreement among the classifications made by the cardiologists on the basis of the scripts was greater than 75 percent.

Eight actors representing each of the possible combinations of race, sex, and age were recruited to portray the patients in the interviews (Fig. 1). Actors were used because they were considered better able than patients to express a consistent range of emotions and to read the scripts verbatim for recording. The interviews were recorded at a single studio, with the actors following a particular set of directions for each script. The hand motions used by the actors were identical for each script, the actors were dressed in identical gowns, and the camera position was the same for all interviews. The video recordings were produced by a company with experience in the production of educational medical video products (Interactive Drama, Bethesda, Md.).

The video segment was introduced by a screen that listed the patient's type of insurance (Blue Cross–Blue Shield indemnity insurance for the 55-year-old patients and Medicare and Blue Cross–Blue Shield supplemental insurance for the 70-year-old patients) and occupation (assembly supervisor for the 55-year-old patients, retired assembly supervisor for the 70-year-old patients). The patients were considered to be at low risk or at high risk for coronary disease on the basis of blood pressure (low risk, 133/81 mm Hg; high risk, 145/86 mm Hg), blood cholesterol concentrations (low risk: low-density lipoprotein [LDL], 146 mg per deciliter [3.8 mmol per liter] and high-density lipoprotein [HDL], 59 mg per deciliter [1.5 mmol per liter]; high risk: LDL, 158 mg per deciliter [4.1 mmol per liter] and HDL, 46 mg per deciliter [1.2 mmol per liter]), and smoking history (low risk, no smoking; high risk, smoking one pack of cigarettes a day for 30 years). None of the patients had diabetes, and all had a father who had had a myocardial infarction at the age of 75 years. These characteristics were based on those of the subjects in the 20th to 30th percentiles for the risk of coronary artery disease (low risk) and those in the 70th to 80th percentiles (high risk) in the Framingham Study.[25]

To assess their decisions about management, the physicians were asked to characterize the type of chest pain described by the patient and to estimate the probability that he or she had clinically significant coronary disease (defined as ≥70 percent narrowing of an epicardial coronary artery). The physicians were then asked if they wished to order further cardiac evaluations for the patient and were given four options: no stress test, regular stress test, stress test with thallium, and other types of functional cardiac assessment (e.g., stress echocardiography). The physicians were then shown the results of one of three stress tests with thallium, asked to estimate the probability of coronary disease on the basis of the results of the stress test, and asked whether they wished to refer the patient for cardiac catheterization.

The section on patient assessment included a two-part survey to be completed by the physician, modified from the instrument developed by van Ryn (van Ryn M: personal communication). The first component of the survey was a 10-item scale, which included items assessing the physicians' judgments of the emotional, intellectual, and communication characteristics of patients; these factors are believed to be predictive of patient compliance and treatment outcomes. The personal characteristics of the patients were evaluated by the physicians on a seven-point Likert scale that rated the strength and direction of the attributes within the domain, with scores ranging from −3 (negative attributes) to 3 (positive attributes). The second component of the instrument included six individual assessment items evaluated on a five-point Likert scale, with 1 representing "very unlikely" and 5 representing "very likely." The physicians were asked to predict the likelihood that the patient seen in the interview had overreported his or her symptoms, the likelihood that the patient would miss follow-up appointments, the likelihood that the patient would participate in treatment, the likelihood that the patient would sue for malpractice, the likelihood that the patient would comply with therapy, and the likelihood that the patient would benefit from a revascularization procedure (coronary angioplasty or coronary-artery bypass surgery). Finally, the survey asked the physicians to report their age, race or ethnic group, sex, specialty and subspecialty, and year of graduation from medical school.

The software program required that all the components of the 10-minute survey instrument be presented to each physician and that the physician see the entire interview before answering questions. The interactive programs were developed with the use of Combersim, a proprietary software program designed by Interactive Drama for the creation of standardized multimedia patients on a personal computer for training purposes.

Study Subjects and Data Collection

Physicians who were in full-time clinical practice and who attended the 1997 annual meeting of the American College of Physicians (ACP) or the 1996 annual meeting of the American Academy of Family Practice (AAFP) were eligible to participate in the survey. Physicians who registered for the meetings in advance were mailed a postcard inviting them to participate in the survey, with the incentive of an offer of a food gift. The physicians were told they were participating in a study of clinical decision making but were not told that the primary purpose of the study was to assess the effects of patients' race and sex on decision making.

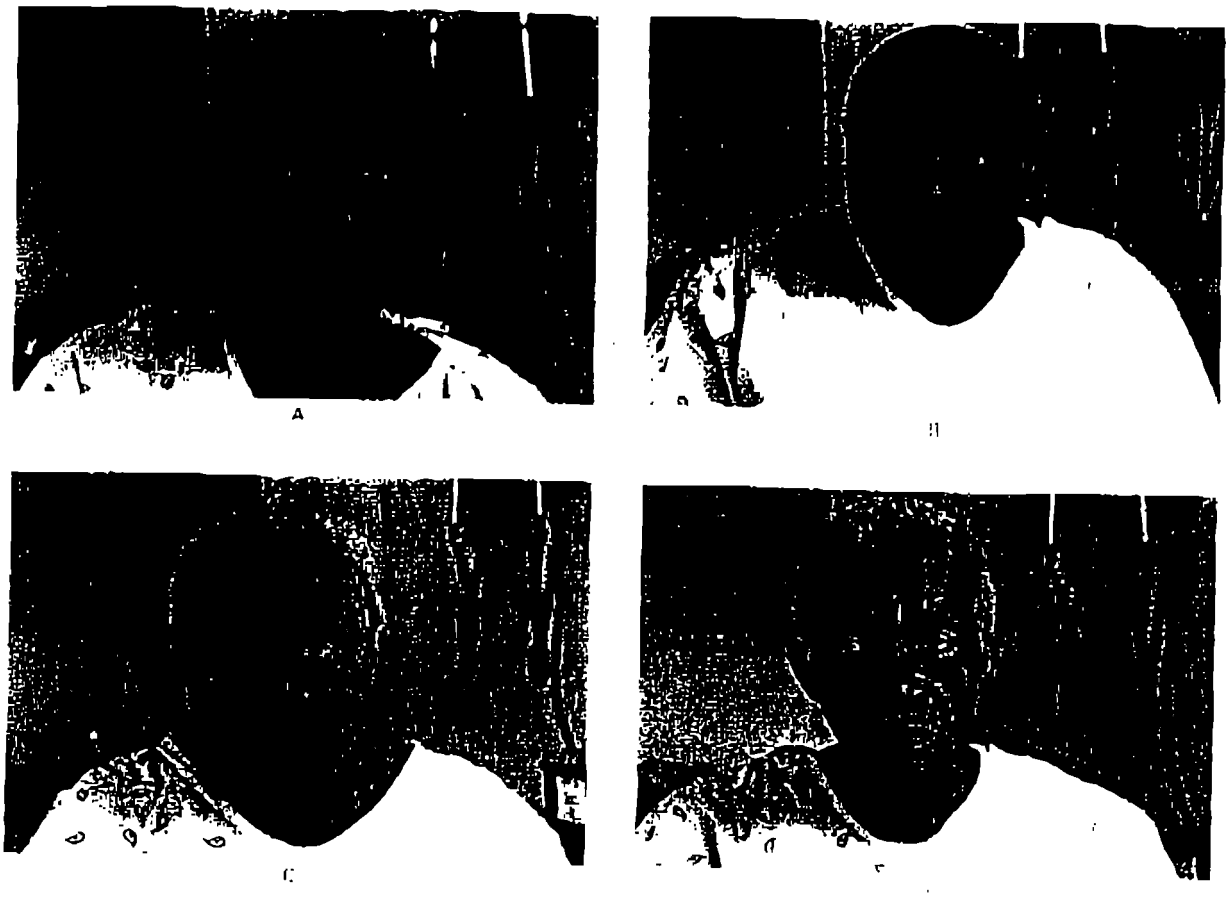


Figure 1. Patients as Portrayed by Actors in the Video Component of the Survey.

Panel A shows a 55 year old black woman, Panel B a 55 year old black man, Panel C a 70 year old black woman, Panel D a 70 year old black man, Panel E a 55 year old white woman, Panel F a 55 year old white man, Panel G a 70 year old white woman, and Panel H a 70 year old white man.

Statistical Analyses

EFFECT OF RACE AND SEX ON PHYSICIANS' RECOMMENDATIONS FOR CARDIAC CATHETERIZATION

TABLE 1. CHARACTERISTICS OF THE PHYSICIANS ACCORDING TO THE RACE AND SEX OF THE PATIENT.*

CHARACTERISTIC	WHITE MALE PATIENT	BLACK MALE PATIENT	WHITE FEMALE PATIENT	BLACK FEMALE PATIENT	P VALUE
No. of physicians	180	180	180	180	
Mean age — yr	44.2	43.6	42.9	42.8	0.57
Sex — no. (%)					0.02
Male	130 (72.2)	131 (72.8)	126 (70.0)	107 (59.4)	
Female	50 (27.8)	49 (27.2)	54 (30.0)	73 (40.6)	
Race or ethnic group — no. (%)					0.41
White	148 (82.2)	136 (75.6)	139 (77.2)	137 (76.1)	
Black	7 (3.9)	8 (4.4)	7 (3.9)	11 (6.1)	
Hispanic	5 (2.8)	8 (4.4)	7 (3.9)	8 (4.4)	
Alcut	0	4 (2.2)	0	0	
Asian	16 (8.9)	13 (7.2)	20 (11.1)	17 (9.4)	
Don't know or no answer	4 (2.2)	11 (6.1)	7 (3.9)	7 (3.9)	
Specialty — no. (%)					0.97
Internal medicine	68 (37.8)	67 (37.2)	69 (38.3)	71 (39.4)	
Family medicine	104 (57.8)	106 (58.9)	101 (56.1)	103 (57.2)	
Other	8 (4.4)	7 (3.9)	10 (5.6)	6 (3.3)	
Board certified — no. (%)					0.63
Yes	164 (91.1)	166 (92.2)	159 (88.3)	162 (90.0)	
No	16 (8.9)	14 (7.8)	21 (11.7)	18 (10.0)	

*Because of rounding, percentages may not total 100.

TABLE 2. PHYSICIANS' ESTIMATES OF THE PROBABILITY OF CORONARY ARTERY DISEASE ACCORDING TO EXPERIMENTAL FACTORS.*

EXPERIMENTAL FACTOR AND CATEGORY	ESTIMATE OF PROBABILITY BEFORE STRESS TEST	P VALUE	ESTIMATE OF PROBABILITY AFTER STRESS TEST	P VALUE
	%		%	
Sex		<0.001		0.15
Male	69.2±18.2		87.5±13.7	
Female	64.1±19.3		86.1±13.3	
Race		0.120		0.26
White	65.5±20.5		87.4±13.7	
Black	67.7±17.1		86.2±13.3	
Age		<0.001		0.03
55 yr	63.8±19.5		85.7±14.0	
70 yr	69.5±17.9		87.9±12.9	
Risk level		<0.001		0.05
Low	63.5±20.4		85.8±14.0	
High	69.8±16.8		87.8±12.9	
Type of chest pain		<0.001		<0.001
Nonanginal pain	58.3±19.0		84.5±14.0	
Possible angina	64.4±18.3		86.2±13.7	
Definite angina	77.1±14.0		89.7±12.3	
Stress-test result		0.77		<0.001
Inferolateral ischemia	67.3±19.3		87.5±15.9	
Anterolateral ischemia	66.1±18.8		84.1±11.7	
Multiple ischemic defects	66.5±18.7		88.8±12.1	

*The results of stress tests were not presented to the physicians for the initial assessment of the probability of disease but were presented for the final assessment. Plus–minus values are means ±SD.

(Table 2). This finding was expected, because all the patients had a positive stress test. The probabilities assigned after the results of the stress test were known differed according to age, the type of chest pain, and the results of the exercise stress test.

Overall, the physicians classified 30.6 percent of the patients as having definite angina, 65.0 percent as having possible angina, and 4.4 percent as having nonanginal chest pain. There were no differences in the assessments of chest pain according to the combined race and sex of the patient ($P=0.20$). The overall rate of agreement with the expert classification was 51 percent and varied from 48 percent to 55 percent for the various combinations of race and sex. Stress tests were recommended for 93.3 percent of white men and white women and for 97.8 percent of black men and black women ($P=0.04$).

The physicians' perceptions of the personal characteristics of the patients differed significantly in 7 of the categories measured on the 10-item scale according to the combined race and sex of the patient ($P<0.05$). However, in no category was the difference greater than 0.87 point on the 7-point Likert scale (Table 3). In addition, the responses with respect to the individual assessment of the predicted behavior of the patients differed significantly for three of the six categories according to the combined race and sex of the patient ($P<0.02$); in no category was the difference greater than 0.27 point on a 5-point Likert scale (Table 3).

In univariate analyses, the race and sex of the pa-

TABLE 3. PHYSICIANS' ASSESSMENTS OF THE CHARACTERISTICS OF THE PATIENTS ACCORDING TO CATEGORY OF RACE AND SEX.*

CHARACTERISTIC	WHITE MALE PATIENT	BLACK MALE PATIENT	WHITE FEMALE PATIENT	BLACK FEMALE PATIENT	P VALUE
Personal characteristics†					
Hostile–friendly	1.81±1.06	1.99±1.06	1.66±1.09	2.23±0.90	0.001
Unintelligent–intelligent	1.91±0.90	1.89±0.97	2.05±0.83	2.00±0.84	0.29
Lacking self-control–self-controlled	2.17±0.98	2.25±0.95	2.28±0.89	2.35±0.79	0.31
Ignorant–knowledgeable	1.31±1.13	1.56±0.93	1.58±1.08	1.51±1.08	0.06
Poor communicator–good communicator	1.61±1.40	1.94±1.21	1.93±1.20	1.94±1.21	0.03
Dependent–independent	1.52±1.20	1.91±1.11	1.45±1.35	1.83±1.10	0.001
Sad–happy	0.24±1.38	0.44±1.50	−0.20±1.45	0.67±1.33	0.001
Negative affect–positive affect	0.14±1.37	0.51±1.44	−0.14±1.54	0.51±1.44	0.001
Worried–indifferent	−0.76±1.66	−1.18±1.58	−1.29±1.42	−0.97±1.49	0.005
Low socioeconomic status–high socioeconomic status	0.69±1.06	−0.09±1.03	0.76±1.01	0.14±1.04	0.001
Individual assessment of predicted behavior					
Likely to overreport symptoms‡	2.04±0.79	1.79±0.60	2.05±0.65	1.84±0.51	0.001
Likely to miss appointments‡	2.04±0.79	2.21±0.83	2.04±0.84	2.04±0.79	0.12
Likely to participate‡	3.88±0.98	3.78±0.88	4.00±0.90	3.81±1.00	0.12
Likely to sue‡	2.54±0.85	2.27±0.84	2.46±0.81	2.32±0.83	0.01
Likely to comply with treatment‡	4.04±0.80	3.97±0.70	4.20±0.63	4.06±0.77	0.02
Likely to benefit from invasive procedure§	3.47±0.72	3.38±0.66	3.44±0.76	3.30±0.75	0.12

*Plus-minus values are means ±SD.

†Patients' personal characteristics were rated on a seven-point Likert scale, with scores ranging from −3 to 3. A higher score indicates a stronger relation with the positive (second listed) characteristic.

‡Physicians were asked to rate patients on a five-point Likert scale, with 1 representing "very unlikely" and 5 representing "very likely."

§Physicians were asked to rate patients on a five-point Likert scale, with 1 representing "much less than average" and 5 representing "much greater than average."

rient were significantly associated with the physicians' decisions about whether to make referrals for cardiac catheterization, with men and whites more likely to be referred than women and blacks, respectively (Table 4). For the other experimental factors, only the type of chest pain was a significant predictor of whether the patient would be referred for cardiac catheterization.

Table 5 shows the results of the multivariable logistic-regression analyses. In the model that included only the main effects of race and sex, we found that both variables were significant predictors of rates of referral for cardiac catheterization. Men and whites were significantly more likely to be referred than women and blacks. These results indicate that the differences with respect to race and sex were not simply due to the differences in the probabilities of disease assigned by the physicians. We then examined the interaction of race and sex in terms of referral for cardiac catheterization ($P=0.06$ for the interaction). Black women were the only patients who were significantly less likely to be referred for cardiac catheterization than white men, who served as the reference category. In addition, age and the type of chest pain were significant predictors of referral for cardiac catheterization, with the odds ratios for all factors similar to those in the univariate results. Sensitivity analyses (alternative model specifications) did not change the results of the main analyses.

DISCUSSION

We found that the race and sex of the patient affected the physicians' decisions about whether to refer patients with chest pain for cardiac catheterization, even after we adjusted for symptoms, the physicians' estimates of the probability of coronary disease, and clinical characteristics. Our findings are most striking for black women. Epidemiologic studies have reported differences in treatment according to race and sex,[1-18] but they could not assess whether these differences were due to differences in the clinical presentation of the patients. This study directly addressed this issue by using actors to represent patients with identical histories and controlling for characteristics reflective of their personalities. Our findings are consistent with the results of

TABLE 4. REFERRAL FOR CARDIAC CATHETERIZATION ACCORDING TO EXPERIMENTAL FACTORS.

EXPERIMENTAL FACTOR AND CATEGORY	MEAN REFERRAL RATE	ODDS RATIO (95% CI)*	P VALUE
	%		
Sex			
Male	90.6	1.0	
Female	84.7	0.6 (0.4–0.9)	0.02
Race			
White	90.6	1.0	
Black	84.7	0.6 (0.4–0.9)	0.02
Age			
66 yr	89.7	1.0	
70 yr	85.6	0.7 (0.4–1.1)	0.09
Risk level			
Low	88.9	1.0	
High	86.4	0.8 (0.5–1.2)	0.31
Type of chest pain			
Nonanginal pain	83.8	1.0	
Possible angina	90.0	1.7 (1.0–3.0)	0.04
Definite angina	89.2	1.6 (0.9–2.7)	0.08
Stress-test result			
Inferolateral ischemia	86.3	1.0	
Anterolateral ischemia	86.7	1.0 (0.6–1.6)	0.89
Multiple ischemic defects	90.0	1.4 (0.8–2.5)	0.20

*CI denotes confidence interval.

TABLE 5. PREDICTORS OF REFERRAL FOR CARDIAC CATHETERIZATION.*

MODEL AND VARIABLE	ODDS RATIO (95% CI)†	P VALUE
Race and sex as separate factors		
Sex		
Male	1.0	
Female	0.6 (0.4–0.9)	0.02
Race		
White	1.0	
Black	0.6 (0.4–0.9)	0.02
Interaction of race and sex		
White male	1.0	
Black male	1.0 (0.5–2.1)	0.99
White female	1.0 (0.6–2.1)	>0.99
Black female	0.4 (0.2–0.7)	0.004

*Both models included all experimental factors as covariates, as well as the probability of coronary artery disease as estimated after the results of the stress tests were known. The first analysis included only the main effects. The second analysis explored a race–sex interaction.

†CI denotes confidence interval.

epidemiologic studies in which the lowest rates of cardiovascular procedures were among nonwhite women.[5,9]

The physicians' recommendations for cardiac catheterization could have reflected their perceptions of the personalities rather than the race or sex of the patients. To assess this possibility, we collected detailed information on the physicians' perceptions of the patients' personalities and other attributes with the use of a 10-item scale and six individual assessment questions. Incorporating this information into the analysis did not change the main results. Also, because we used a balanced, randomized design, the statistical tests of the experimental factors, including the race and sex of the patient, remain valid even if the patients' personality traits and attributes were imperfectly captured by our methods.[26]

Our findings suggest that a patient's race and sex may influence a physician's recommendation with respect to cardiac catheterization regardless of the patient's clinical characteristics. Alternatively, these findings may be the result of other factors not included in the information we presented to the physicians. For example, data on bypass surgery and angioplasty suggest that women may have worse outcomes than men,[27-30] although these effects may be due to differences in other confounding variables rather than to the sex of the patient.[28,30] Why these clinical effects would influence recommendations for black women and not white women is unclear. We did not find lower rates of referrals for stress tests among women or blacks.

Our study design has several strengths. By having actors pose as patients, clothed in an identical manner and having identical insurance and occupations, we removed the effects of differing socioeconomic status and insurance from our experiment. By providing the actors with identical scripts, by having them present in hospital gowns under identical direction, and by creating the program in a fixed format, we removed the effects of differences in the presentation of clinical symptoms by patients from our assessment. Finally, by asking the physicians for their estimates of the probability of coronary artery disease, we were able to control for differences in their perceptions of the prevalence of disease according to the race and sex of the patients. Although the physicians' estimates of the probability of disease before the results of the stress test were known were higher than the values for nonanginal pain reported in the literature,[31,32] these estimates are most relevant in the analysis of the treatment recommendations. Physicians' tendency to overestimate the probability of coronary artery disease in patients from groups with a low prevalence of disease has been documented previously.[33]

Our finding that the race and sex of the patient influence the recommendations of physicians independently of other factors may suggest bias on the part of the physicians. However, our study could not assess the form of bias. Bias may represent overt prejudice on the part of physicians or, more likely, could be the result of subconscious perceptions rather than deliberate actions or thoughts.[34,35] Subconscious bias occurs when a patient's membership

in a target group automatically activates a cultural stereotype in the physician's memory regardless of the level of prejudice the physician has.[35]

Our study has two main limitations. First, we assessed the management decisions of physicians using video recordings of actors portraying patients and a computerized survey instrument. Several reports support the use of case vignettes to assess clinical decision making by physicians.[36-40] In two studies of the external validity of case vignettes, assessments made on the basis of written case descriptions correlated highly with those made on the basis of examinations of patients with equivalent symptoms seen in person.[37,38] Video recordings rather than written case presentations may increase the accuracy of the probability estimates made by physicians.[40]

Second, the recruitment of physicians at national meetings of major professional organizations may have resulted in nonrepresentative samples. Physicians who attend professional meetings may be better informed than those who do not attend. Also, the physicians who volunteered for this project may have had a greater interest than others in coronary heart disease.

Our findings indicate that the race and sex of patients independently influence physicians' recommendations for the management of chest pain. They suggest that decision making by physicians may be an important factor in explaining differences in the treatment of cardiovascular disease with respect to race and sex.

Supported by a grant (HS07315) from the Agency for Health Care Policy and Research

We are indebted to Damon Seils for his assistance in the preparation of the manuscript and to Henry Glick, M.A., for providing the risk profiles from the Framingham Study for use in this study.

REFERENCES

1. Wenneker MB, Epstein AM. Racial inequalities in the use of procedures for patients with ischemic heart disease in Massachusetts. JAMA 1989;261:253-7.
2. Maynard C, Litwin PE, Martin JS, et al. Characteristics of black patients admitted to coronary care units in metropolitan Seattle: results from the Myocardial Infarction Triage and Intervention Registry (MITI). Am J Cardiol 1991;67:18-23.
3. Johnson PA, Lee TH, Cook EF, Rouan GW, Goldman L. Effect of race on the presentation and management of patients with acute chest pain. Ann Intern Med 1993;118:593-601.
4. Steingart RM, Packer M, Hamm P, et al. Sex differences in the management of coronary artery disease. N Engl J Med 1991;325:226-30.
5. Ayanian JZ, Epstein AM. Differences in the use of procedures between women and men hospitalized for coronary heart disease. N Engl J Med 1991;325:221-5.
6. Tobin JN, Wassertheil-Smoller S, Wexler JP, et al. Sex bias in considering coronary bypass surgery. Ann Intern Med 1987;107:19-25.
7. Peterson ED, Wright SM, Daley J, Thibault GE. Racial variation in cardiac procedure use and survival following acute myocardial infarction in the Department of Veterans Affairs. JAMA 1994;271:1175-80.
8. Peterson ED, Shaw LK, DeLong ER, Pryor DB, Califf RM, Mark DB. Racial variation in the use of coronary-revascularization procedures: are the differences real? Do they matter? N Engl J Med 1997;336:480-6.
9. Giles WH, Anda RF, Casper ML, Escobedo LG, Taylor HA. Race and sex differences in rates of invasive cardiac procedures in US hospitals: data from the National Hospital Discharge Survey. Arch Intern Med 1995;155:318-24.
10. Whittle J, Conigliaro J, Good CB, Lofgren RP. Racial differences in the use of invasive cardiovascular procedures in the Department of Veterans Affairs medical system. N Engl J Med 1993;329:621-7.
11. Udvarhelyi IS, Gatsonis C, Epstein AM, Pashos CL, Newhouse JP, McNeil BJ. Acute myocardial infarction in the Medicare population: process of care and clinical outcomes. JAMA 1992;268:2530-6.
12. Gornick ME, Eggers PW, Reilly TW, et al. Effects of race and income on mortality and use of services among Medicare beneficiaries. N Engl J Med 1996;335:791-9.
13. Carlisle DM, Leake BD, Shapiro MF. Racial and ethnic disparities in the use of cardiovascular procedures: associations with type of health insurance. Am J Public Health 1997;87:263-7.
14. Laouri M, Kravitz RL, French WJ, et al. Underuse of coronary revascularization procedures: application of a clinical method. J Am Coll Cardiol 1997;29:891-7.
15. Bickell NA, Pieper KS, Lee KL, et al. Referral patterns for coronary artery disease treatment: gender bias or good clinical judgment? Ann Intern Med 1992;116:791-7.
16. Mark DB, Shaw LK, DeLong ER, Califf RM, Pryor DB. Absence of sex bias in the referral of patients for cardiac catheterization. N Engl J Med 1994;330:1101-6.
17. Ferguson JA, Tierney WM, Westmoreland GR, et al. Examination of racial differences in management of cardiovascular disease. J Am Coll Cardiol 1997;30:1707-13.
18. Blustein J, Weitzman BC. Access to hospitals with high-technology cardiac services: how is race important? Am J Public Health 1995;85:345-51.
19. Toller GH, Stone PH, Muller JE, et al. Effects of gender and race on prognosis after myocardial infarction: adverse prognosis for women, particularly black women. J Am Coll Cardiol 1987;9:473-82.
20. Wenger NK, Speroff L, Packard B. Cardiovascular health and disease in women. N Engl J Med 1993;329:247-56.
21. Beery TA. Gender bias in the diagnosis and treatment of coronary artery disease. Heart Lung 1995;24:427-35.
22. Newby LK, Rutsch WR, Califf RM, et al. Time from symptom onset to treatment and outcomes after thrombolytic therapy. J Am Coll Cardiol 1996;27:1646-55.
23. Ades PA, Waldmann ML, Polk DM, Coflesky JT. Referral patterns and exercise response in the rehabilitation of female coronary patients aged greater than or equal to 62 years. Am J Cardiol 1992;69:1422-5.
24. Diamond GA. A clinically relevant classification of chest discomfort. J Am Coll Cardiol 1983;1:574-5.
25. Abbott RD, McGee D. The Framingham Study: an epidemiological investigation of cardiovascular disease. Section 37. The problem of developing certain cardiovascular diseases in 8 years at specific values of some characteristics. Bethesda, Md.: National Heart, Lung, and Blood Institute, 1987. (NIH publication no. 87-2284.)
26. Begg MD, Lagakos S. Loss in efficiency caused by omitting covariates and misspecifying exposure in logistic regression models. J Am Stat Assoc 1993;88:166-70.
27. Loop FD, Golding LR, MacMillan JP, Cosgrove DM, Lytle BW, Sheldon WC. Coronary artery surgery in women compared with men: analyses of risks and long-term results. J Am Coll Cardiol 1983;1:383-90.
28. Kimmel SE, Berlin JA, Strom BL, Laskey WK. Development and validation of a simplified predictive index for major complications in contemporary percutaneous transluminal coronary angioplasty practice. J Am Coll Cardiol 1995;26:931-6.
29. O'Connor GT, Plume SK, Olmstead EM, et al. A regional prospective study of in-hospital mortality associated with coronary artery bypass grafting. JAMA 1991;266:803-9.
30. Bell MR, Holmes DR Jr, Berger PB, Garratt KN, Bailey KR, Gersh BJ. The changing in-hospital mortality of women undergoing percutaneous transluminal coronary angioplasty. JAMA 1993;269:2091-5.
31. Diamond GA, Forrester JS. Analysis of probability as an aid in the clinical diagnosis of coronary-artery disease. N Engl J Med 1979;300:1350-8.
32. Pryor DB, Harrell FE Jr, Lee KL, Califf RM, Rosati RA. Estimating the likelihood of significant coronary artery disease. Am J Med 1983;75:771-80.
33. Schulman KA, Escarce JJ, Eisenberg JM, et al. Assessing physicians' estimates of the probability of coronary artery disease: the influence of patient characteristics. Med Decis Making 1992;12:109-14.
34. Escarce JJ, Epstein KR, Colby DC, Schwartz JS. Racial differences in the elderly's use of medical procedures and diagnostic tests. Am J Public Health 1993;83:948-54.
35. Devine PG. Stereotypes and prejudice: their automatic and controlled components. J Pers Soc Psychol 1989;56:5-18.

36. Wigton RJ, Poses RM, Collins M, Cebul RD. Teaching old dogs new tricks: using cognitive feedback to improve physicians' diagnostic judgments on simulated cases. Acad Med 1990;65:Suppl:S5-S6.
37. Kirwan JR, Chaput de Saintonge DM, Joyce CRB, Currey HLF. Clinical judgment in rheumatoid arthritis. I. Rheumatologists' opinion and the development of "paper patients." Ann Rheum Dis 1983;42:644-7.
38. Kirwan JR, Bellamy N, Condon H, Buchanan WW, Barnes CG. Judging "current disease activity" in rheumatoid arthritis — an international comparison. J Rheumatol 1983;10:901-5.
39. Jones TV, Gerrity MS, Earp JA. Written case simulations: do they predict physicians' behavior? J Clin Epidemiol 1990;43:805-15.
40. McNutt RA, O'Meara JJ, de Blick R, et al. The effect of visual information and order of patient presentation on the accuracy of physicians' estimates of acute ischemic heart disease: a pilot study. Med Decis Making 1992;12:342. abstract.

Prague, Czech Republic ANNA RUELLAN, M.D.

Sounding Board

MISUNDERSTANDINGS ABOUT THE EFFECTS OF RACE AND SEX ON PHYSICIANS' REFERRALS FOR CARDIAC CATHETERIZATION

IN the February 25 issue of the *Journal*, Schulman et al. claimed that the "race and sex of a patient independently influence how physicians manage chest pain."[1] Their study received extensive coverage in the news media. It was reported in most major newspapers[2-4] and was a feature story on ABC's *Nightline*, with Surgeon General David Satcher providing commentary.[5] Unfortunately, in each case, the results were overstated. We explore what went wrong and suggest ways to improve the communication of data to the public. Our purpose is not to deny the occurrence of racial or sex bias, rather to emphasize the importance of presenting information accurately.

THE STUDY AND MEDIA COVERAGE

In a controlled study, Schulman et al. determined how often doctors recommended cardiac catheterization for hypothetical patients with chest pain. Primary care physicians attending two professional meetings were shown a videotaped interview with a patient (portrayed by an actor) and given other relevant data (cardiac risk factors and the result of a thallium stress test) and were then asked whether they would recommend catheterization. The investigators developed 18 hypothetical scenarios representing all possible combinations of the following factors: 3 descriptions of chest pain, 2 levels of cardiac risk, and 3 results of thallium stress tests. In order to isolate the influence of race, sex, and age on the physicians' decisions, each scenario was portrayed by eight actors (representing two races, both sexes, and two ages). The investigators then determined how often these "patients" with identical symptoms and medical histories were referred for cardiac catheterization.

The central findings of the study are presented in Table 1. On the basis of both the reported referral rates for blacks and whites and for men and women and the reported odds ratios, we inferred the separate referral rates for white men, black men, white women, and black women. Black women were referred for cardiac catheterization less often than white men, black men, and white women (78.8 percent of black women were referred, vs. 90.6 percent for each of the other groups). Although the authors explicitly demonstrated that only black women had lower rates of referral, they focused their discussion on the results aggregated according to race or sex — implying that all blacks (i.e., male and female) were referred less often than all whites and that all women (black and white) were referred less often than all men.

TABLE 1. RATE OF REFERRAL FOR CARDIAC CATHETERIZATION, ODDS OF REFERRAL, ODDS RATIO, AND RISK RATIO ACCORDING TO SEX AND RACE.*

PATIENTS	MEAN REFERRAL RATE	ODDS OF REFERRAL	ODDS RATIO (95% CI)	RISK RATIO (95% CI)
	%			
Four strata				
White men†	90.6	9.6 to 1	1.0	
Black men	90.6	9.6 to 1	1.0 (0.5–2.1)	
White women	90.6	9.6 to 1	1.0 (0.5–2.1)	
Black women	78.8	3.7 to 1	0.4 (0.2–0.7)	0.87 (0.80–0.95)
Aggregate data				
White†	90.6	9.6 to 1	1.0	
Black	84.7	5.5 to 1	0.6 (0.4–0.9)	0.93 (0.89–0.99)
Men†	90.6	9.6 to 1	1.0	
Women	84.7	5.5 to 1	0.6 (0.4–0.9)	0.93 (0.89–0.99)
Overall	87.7	7.1 to 1		

*Referral rates for the four strata were inferred from aggregate rates and odds ratios reported by Schulman et al.[1] The odds of referral were calculated according to the following formula: referral rate ÷ (100% − referral rate). The risk ratio was calculated as the referral rate for the group in question divided by the referral rate for the reference group. CI denotes confidence interval.

†This was the reference group.

The central message reported by the media was that blacks and women were "40 percent less likely" to be referred for cardiac testing than whites or men (or "60 percent as likely" to be referred). Table 2 shows how findings were presented on *Nightline* and in each of the five U.S. newspapers with the largest circulations. Most of the media reports interpreted the article in the *Journal* as meaning that blacks and women receive less adequate care than whites or men. Several reports suggested that the higher cardiac-associated mortality rates observed in blacks might actually be the result of differences in catheterization rates. Moreover, both the reports and the quoted comments of the lead author implied that conscious or unconscious sex and racial biases pervade American medicine.

PROBLEMS IN COMMUNICATING THE FINDINGS

There are three basic problems with how the data were presented: the magnitude of the finding was overstated, the comparison reported was incorrect, and the implicit assumption — that catheterization always represents the best care — was unwarranted. These problems began with the way in which the authors chose to write the article, persisted despite peer and editorial review, and were magnified in the news media. To highlight each problem, we consider three headlines that would have better characterized the findings.

TABLE 2. PRESENTATION OF STUDY FINDINGS IN SELECTED MAJOR NEWS MEDIA

SOURCE*	HEADLINE	CHARACTERIZATION OF PRIMARY FINDING	INTERPRETATION	IMPLICATION
Nightline†	"A Recent Study Shows That Doctors Diagnose Black and White Patients Differently"	"In our main analysis we found that blacks were 40 percent less likely to be referred for cardiac catheterization compared to whites."	"A recent study shows that doctors diagnose black and white patients differently."	"It's having an adverse effect on the health of their patients and there is growing statistical evidence that if a patient is black he or she is significantly likely to get a lesser quality of medical care."
USA Today‡	"Heart Care Reflects Race and Sex, Not Symptoms"	"Blacks and women with chest pain are 40% less likely than whites or men to be referred by physicians for cardiac catheterization."	"Race and sex of patients with chest pain influence whether they're sent for the most definitive test for heart disease."	"... the new study truly does indicate that a bias exists."
Washington Post§	"Georgetown University Study Finds Disparity in Heart Care; Doctors Less Likely to Refer Blacks, Women for Cardiac Test"	"Physicians said they would refer blacks and women to heart specialists for cardiac catheterization tests only 60 percent as often as they would prescribe the procedure for white male patients."	"Doctors are far less likely to recommend sophisticated cardiac tests for blacks and women than for white men with identical complaints of chest pain."	"Authors suggest the differences are the consequences of race and sex bias [and that] the attitudes demonstrated in the survey exist in all medical specialties ... you don't have to be consciously racist to see the influence of race and gender playing out in treatment. That's what this study confirms."
Los Angeles Times‖	"Heart Study Points to Race, Sex Bias"	"[Doctors] refer blacks and women to heart specialists 60% as often as they would white male patients."	"Doctors are far less likely to recommend sophisticated cardiac tests for blacks and women than for white males."	"Authors suggest the differences are the consequences of race and sex bias."
Wall Street Journal¶	"Study Suggests Race, Sex Influence Physicians' Care"	"Doctors are only 60% as likely to order cardiac catheterization for women and blacks as for men and whites."	"Women and blacks complaining of chest pain are less likely than men and whites to receive the best cardiac testing."	"Unconscious prejudices among doctors may help explain [the findings]."
*New York Times***	"Doctor Bias May Affect Heart Care, Study Finds"			

*Since the *Wall Street Journal* and *New York Times* stories were based on the same Associated Press report, the characterization of the primary finding, interpretation, and stated implication were the same in the two newspapers. The quotations in the table are from the *New York Times*.

"Study Shows Blacks Referred 7 Percent Less Often Than Whites"

The authors chose to summarize the relative chance of referral for blacks as compared with whites using an odds ratio — literally, the ratio of the odds in favor of being referred for catheterization for blacks to the odds for whites: $(0.847 \div 0.153) \div (0.906 \div 0.094) = 5.5 \div 9.6 = 0.6$. In words, the odds that blacks would be referred for catheterization were 40 percent lower than the odds of referral for whites.

The use of odds ratios is unfortunate. Few people think in terms of odds or encounter them in daily life. Perhaps for this reason, many people tend to equate odds with probability (the most familiar way to characterize chance) and thus to equate odds ratios with risk ratios. The quotations noted in Table 2 suggest that the major newspapers, *Nightline*, and even the surgeon general did just that in characterizing the results of the study by Schulman et al. When the outcome of interest is uncommon (i.e., it occurs less than 10 percent of the time), such confusion makes little difference, since odds ratios and risk ratios are approximately equal. When the outcome is more common, however, the odds ratio increasingly overstates the risk ratio.[6,11]

Because the study by Schulman et al. involved a very common event (84.7 percent of blacks and 90.6 percent of whites were referred for catheterization), the overstatement in this case was extreme. The reported odds ratio of 0.6 actually corresponds to a risk ratio of 0.93 (i.e., 84.7 percent divided by 90.6 percent). Inappropriately equating odds ratios with risk ratios led to the mistaken impression that blacks had a 40 percent lower probability of referral than whites, whereas in fact, the probability of referral for blacks was 7 percent lower. In this case, the failure to distinguish between odds ratios and risk ratios had profound consequences for how the magnitude of the difference in referral rates for blacks and whites (or women and men) was portrayed. Regardless of the magnitude, however, the comparison itself was misleading.

"Study Finds Black Men and White Men Referred at the Same Rate"

The article in the *Journal* focused on the aggregate data, but the picture is quite different when the data are stratified according to both race and sex. As Table 1 shows, the rate of referral was the same for three of the four strata (90.6 percent); only black

women had a different rate of referral (78.8 percent). In other words, the effect of race on the referral rate was modified by whether the patient was male or female (in other words, the effect of race was modified by sex). When an analysis shows an important effect modification (or interaction), it no longer makes sense to combine the data in a way that obscures this difference.[12] To present the data correctly, the focus should be on the comparisons of these four groups, not on the data aggregated according to age or sex. An accurate statement of the findings would be that white women, white men, and black men were all referred at the same rate and that only black women had a lower rate of referral.

"Study Suggests Possible Overtesting in Black Men and White Men"

The focus on race and sex obscured a remarkable finding of the study by Schulman et al.: overall, almost 90 percent of the patients were referred for catheterization. Both the authors and the journalists argued that the noted differences in referral rates meant that blacks and women receive less adequate care than whites and men. The way in which cardiac catheterization was characterized in the press (e.g., "the most sophisticated examination," "the best cardiac test," and "the most aggressive treatment") implied that a noninvasive evaluation (or treatment without catheterization) is incomplete. The authors and reporters failed to mention the potential complications of catheterization and the possibility of overtreatment (i.e., unnecessary catheterization). In fact, there is growing evidence that more treatment is not always better and can actually be harmful.[13] A study recently reported in the *Journal*, for example, found that an invasive strategy (immediate cardiac catheterization) for all patients with non–Q-wave myocardial infarction resulted in higher rates of myocardial infarction and death than a more conservative approach.[14]

Schulman et al. undoubtedly recognized that referring a patient for catheterization is not always the right decision. They were careful to present the physicians in their study with a broad spectrum of symptoms and medical histories, using 18 scenarios in which the probability of clinically significant coronary artery disease varied widely. Extremely high rates of referral were observed both for patients at low risk and for those at high risk for coronary disease (89 percent and 86 percent, respectively), where the risk of coronary disease was determined on the basis of blood pressure, lipid values, and history of smoking. Although the appropriate rate of referral for this hypothetical cohort is an open question, the observed rate seems implausibly high.

UNINTENDED SIDE EFFECTS

The purpose of the study by Schulman et al. — to look for evidence of racial or sex bias in the evaluation of chest pain — is laudable. It is important to expose discriminatory practice in medicine. It is equally important not to exaggerate the prevalence of such practice. Unfortunately, the presentation of the data overstated the magnitude of the differences observed (by interpreting an odds ratio as a relative risk) and the target of discrimination (by suggesting that blacks and women were the targets as opposed to black women), and thus influenced the characterization in the media of the likely consequences (by suggesting that lower referral rates explain higher rates of cardiovascular-associated mortality). These exaggerations serve only to fuel anger and undermine the trust between physicians and their patients.

The lack of caution in presenting and interpreting the results of the study makes it too easy to extend the findings to all physicians in all settings and to come to the erroneous conclusion that discrimination on the basis of race and sex pervades American medicine. As a result, blacks and women may be more likely to ascribe disappointing interactions with their physicians to prejudice rather than to other plausible factors (e.g., cost-containment pressures, poor interpersonal skills, or simply a bad day). Physicians may become fearful that their actions will be misinterpreted by their patients who are black or female. Physicians might even become more concerned about appearance than about good care or, worse, might avoid treating blacks and women. The exaggeration of the data does nothing to advance the fight against discrimination on the basis of race or sex; indeed, it arguably aggravates the problem.

We believe the findings of the study would be better characterized as follows: in a study of referral for cardiac catheterization, physicians shown videotaped vignettes referred black women 79 percent of the time but referred other patients 91 percent of the time. We are unsure about the correct interpretation. Is it possible that none of the physicians discriminated between white and black men or between white men and white women and that discrimination could be detected only when race and sex were combined? Could the findings reflect some systematic problem in the study design, the collection of the data, or the analysis? Or could the findings simply be the result of chance? We believe the study raises questions about differential treatment of black women and that the most reasonable approach is to take a second look.

HOW TO DO BETTER

Table 3 presents guidelines for helping researchers, journal editors, and reporters present the results of medical research more clearly and accurately.

Reporting Absolute Event Rates

In covering the study by Schulman et al., reporters presented relative measures of difference when

TABLE 3. GUIDELINES FOR COMMUNICATORS

PROBLEM	EXAMPLE OF MISLEADING LANGUAGE	SOLUTION	EXAMPLE OF IMPROVED LANGUAGE
Relative measure reported without event rates	Blacks are 40% less likely to be referred for catheterization	Report absolute event rates	91% of white men, white women, and black men were referred for catheterization, as compared with 79% of black women
Odds ratios interpreted as risk ratios	Black women are referred 60% less often than white men (odds ratio, 0.4)	Convert odds ratios to risk ratios	Black women were referred 13% less often than white men (risk ratio, 0.87)
Findings about black women attributed to all blacks and all women	Blacks and women are less likely to be referred for catheterization than whites and men	Ensure that reported comparisons are appropriate	White and black men were referred at the same rate, and white men and women were referred at the same rate; only black women were referred at a lower rate
Implicit assumption that more health care means better health care	"Health Care: It's Better If You're White"*	Question whether 100% is the desired rate for testing and treatment	The appropriate referral rate is not known; whether the referral rate for black women is too low or whether it is appropriate is unknown

*This is the title of an article in the *Economist*.[15]

comparing the referral rates for blacks and whites but failed to report the absolute rate of referral for each group. This is not surprising, since the article in the *Journal* emphasized the odds ratios. In fact, the absolute catheterization rates are not mentioned in the abstract or in the text of the article and are reported only in one table. Reporting that blacks were 40 percent less likely to be referred for catheterization than whites is not meaningful unless the rate at which whites were referred is known (0.6 percent vs. 1.0 percent and 60 percent vs. 100 percent both yield the same 60 percent relative risk). Stating the rate for each group under consideration would also help readers assess the magnitude of the differences and might be easier for readers to understand.[16]

Converting Odds Ratios to Risk Ratios

Odds ratios are bound to be interpreted as risk ratios. The problem is all the more relevant given the increasing use of logistic regression (which yields an odds ratio). It is unrealistic to expect reporters or the public to understand this distinction. When event rates are high, odds ratios should be converted to risk ratios. There are simple methods of conversion for both crude and adjusted data.[9,10] Alternatively, odds ratios can be converted to the number needed to treat (i.e., the number of patients who would need to be treated in order to obtain one favorable outcome or to prevent one adverse event).[17] If odds ratios cannot be avoided, one should remind the reader that the higher the base rate, the more the odds ratio will overstate the relative risk. Tools are available to help estimate the extent of overstatement.[10]

Ensuring That Comparisons Are Appropriate

In reporting the results of comparisons, one should be clear about the reference group. If an important interaction is identified, aggregate data should not be used in reporting the results. For example, the finding that blacks were less likely to be referred for catheterization only if they were female demonstrated an important interaction between race and sex. Once this interaction was found, presenting the results for all blacks without accounting for sex was inappropriate.

Questioning the Desired Outcome

What is the gold standard against which the results presented are to be judged? In this case, a number of the reports in the media implied that a referral rate lower than 100 percent was inappropriate, an assumption that is unfounded. In general, question the assumption that more care (testing or treatment) is always better.[13]

CONCLUSIONS

It is tempting to place the blame for what went wrong in the coverage of the study by Schulman et al. on reporters, science writers, and editors in the media and to demand that they improve their reporting. To a large extent, however, the media simply reported what they were told. If the research community does not get it right, we cannot expect the media to do better. The problems we raise here clearly arose from multiple sources: the article itself, the editing process, and statements made by the authors in interviews. Acknowledging these problems is a critical step in preventing their recurrence.

LISA M. SCHWARTZ, M.D.
STEVEN WOLOSHIN, M.D.
H. GILBERT WELCH, M.D.

VA Outcomes Group
White River Junction, VT 05009

The views expressed herein do not necessarily reflect the views of the Department of Veterans Affairs or the U.S. government.

We are indebted to Richard Haver for assistance in locating documents; to Daniel O'Rourke, M.D., for technical advice; and to Elliott Fisher, M.D., M.P.H., for reviewing drafts of the manuscript.

REFERENCES

1. Schulman KA, Berlin JA, Harless W, et al. The effect of race and sex on physicians' recommendations for cardiac catheterization. N Engl J Med 1999;340:618-26.
2. Study suggests race, sex influence physicians' care. Wall Street Journal February 26, 1999:B6.
3. Doctor bias may affect heart care, study finds. New York Times. February 25, 1999:A23.
4. Heart study points to race, sex bias. Los Angeles Times. February 25, 1999:12.
5. Goldstein A. Georgetown University study finds disparity in heart care, doctors less likely to refer blacks, women for cardiac test. Washington Post. February 25, 1999:A01.
6. Rubin R. Heart care reflects race and sex, not symptoms. USA Today. February 25, 1999:1A.
7. Health care and race. ABC News: Nightline. February 24, 1999.
8. Feinstein A. The bias caused by high values of incidence for p1 in the odds ratio assumption that 1 - p1 = 1. J Chronic Dis 1986;39:485-7.
9. Zhang J, Yu KF. What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. JAMA 1998;280:1690-1.
10. Davies HT, Crombie IK, Tavakoli M. When can odds ratios mislead? BMJ 1998;316:989-91.
11. Welch HG, Koepsell TD. Insurance and the risk of ruptured appendix. N Engl J Med 1995;332:396-7.
12. Hennekens CH, Buring JE. Epidemiology in medicine. Boston: Little Brown, 1987.
13. Fisher ES, Welch HG. Avoiding the unintended consequences of growth in medical care: how might more be worse? JAMA 1999;281:446-53.
14. Boden WE, O'Rourke RA, Crawford MH, et al. Outcomes in patients with acute non-Q-wave myocardial infarction randomly assigned to an invasive as compared with a conservative management strategy. N Engl J Med 1998;338:1785-92. [Erratum, N Engl J Med 1998;339:1091.]
15. Health care: it's better if you're white. The Economist. February 27, 1999:28-9.
16. Schwartz LM, Woloshin S, Black WC, Welch HG. The role of numeracy in understanding the benefit of screening mammography. Ann Intern Med 1997;127:966-72.
17. Sackett D, Deeks J, Altman D. Down with odds ratios. EBM Evidence-Based Med 1996;1(6):164-6.

Senator Edward M. Kennedy

HEALTH CARE FAIRNESS

GOAL: Eliminate racial and ethnic disparities in health access and outcomes.

BACKGROUND: Minority communities suffer disproportionately from many severe health problems and have higher mortality rates than whites for many treatable health conditions. African Americans who are suffering from lung cancer and heart disease often do not get the same costly treatments as their white counterparts. Even after they obtain health insurance, Hispanic children are four times more likely than white children to lack a usual source of health care. Barriers to care such as poverty, lack of health insurance, and bias in the health care system are each part of a complex set of factors that have resulted in the current disparities. Not enough research is being done to understand and eliminate racial and ethnic health disparities, and existing federal research efforts are not being coordinated in a strategic, comprehensive manner. In 1999 alone, several studies that illustrate the extent of racial and ethnic health disparities have been published in the *New England Journal of Medicine* and *Journal of the American Medical Association*. The Institute of Medicine at the National Academy of Sciences, Memorial Sloan-Kettering Cancer Center, the National Cancer Institute, Georgetown University, the University of Rochester, the Kaiser Family Foundation, and the Commonwealth Fund are some of the research institutions that have recently found evidence of this problem.

PROPOSAL: The Health Care Fairness Act comprehensively addresses the complex set of factors which surround racial and ethnic health disparities. This approach includes an increased commitment to research on minority health, improved data systems, culturally competent health care delivery, and efforts to increase public awareness of the existence of health disparities and the resources that are available to improve minority health outcomes. Together, these changes will increase our knowledge of the nature and causes of these disparities, and improve the quality and outcomes of health care services for minority populations, giving fair care to everyone.

POLITICS: Recent polling conducted by the Kaiser Family Foundation shows that there is concern among African Americans and Hispanic Americans about the quality of the health care that they receive compared to whites. The Health Care Fairness Act has drawn extensive support from individuals and groups that represent the health care concerns of communities of color including Dr. Louis Sullivan, Representative Jesse Jackson Jr., Representative John Lewis, the National Medical Association, the National Hispanic Medical Association, and the Association of Minority Health Professions Schools. In addition, Senator Kennedy has bridged the significant gap that had existed between these entities and NIH on the means of addressing health disparities. This bill has the full support of Dr. Harold Varmus, NIH Director. Finally, Surgeon General David Satcher, who is leading an effort by the Administration to eliminate racial and ethnic health disparities by 2010, has characterized Senator Kennedy's bill as a "critical contribution" to that effort.

COST: The estimated cost of the Health Care Fairness Act is $1.2 billion over five years.

THE HEALTH CARE FAIRNESS ACT OF 1999 -- S.1880

SENATOR KENNEDY

INOUYE-AKAKA

Racial and ethnic minorities are not receiving adequate health care. Over the past few decades, we have made great advances as a nation in science and medicine. However, all our citizens have not shared in the benefits of these advances. Minority populations have significantly higher rates of death from cancer and heart disease as well as higher rates of HIV/AIDS, diabetes, and other severe health problems. We know that poverty, lack of health insurance, and other barriers to care are undermining the health of minority communities. However, we have not made the commitment necessary to understanding the genetic and behavioral differences that also affect health outcomes. In addition, recent studies show that bias in the health care system is another factor in racial and ethnic health disparities.

Elimination of health disparities must be a higher priority. The Health Care Fairness Act includes an increased commitment to research on minority health, improved data systems, and culturally competent health care delivery. These changes will increase our knowledge of the nature and causes of these disparities, and improve the quality and outcomes of health care services for minority populations.

TITLE I - IMPROVES MINORITY HEALTH THROUGH NIH: The Health Care Fairness Act establishes a Center for Research on Minority Health at NIH. The Center will oversee the development of an NIH-wide plan and budget for research on minority health. The Center will also award grants to institutions across the country that serve under-represented populations. These funds will be used to conduct research into the nature, causes, and remedies for health disparities, train minorities as biomedical research professionals, and improve infrastructure for conducting biomedical research. In addition, qualified health professionals who agree to engage in biomedical research on minority health will be eligible to receive $35,000 from NIH to repay educational loans for each year they engage in such research.

TITLE II - ADDRESSES BIAS IN HEALTH CARE THROUGH EDUCATION: Bias in the health care system can be reduced through increased awareness of factors contributing to health disparities and by improved delivery of health services. This bill establishes pilot projects to develop educational tools that both new and experienced health care professionals can use to improve their cultural competency skills as well as skills in other aspects of health care delivery that can help reduce disparity in health outcomes.

TITLE III - STRENGTHENS RESEARCH INTO HEALTH CARE QUALITY AND ACCESS: The Health Care Fairness Act increases the federal commitment to these social science aspects of racial and ethnic health disparities by directing the Agency for Health Care Policy and Research to conduct and support research into health care quality and access for minority communities, to promote effective interventions in minority communities, and to develop outcome measures to assess and improve health care quality for minority communities.

TITLE IV- EXAMINES COLLECTION OF DATA ON RACE OR ETHNICITY: It is hard to fully understand how different health conditions affect minority communities without reliable and complete data. The Health Care Fairness Act funds a study to determine what steps the federal government must take to ensure that all necessary information on racial and ethnic health disparities is collected.

TITLE V - INCREASES PUBLIC AWARENESS: Awareness is an important tool in the reduction of racial and ethnic health disparities. The Health Care Fairness Act provides funding for a public awareness campaign to inform minority populations of the health conditions that strike their communities disproportionately and the resources that are available to improve minority health outcomes.

PRESS RELEASE OF SENATOR EDWARD M. KENNEDY ANNOUNCING INTRODUCTION OF THE HEALTH CARE FAIRNESS ACT OF 1999 MONDAY, NOVEMBER 8, 1999

For Immediate Release
November 8, 1999

Contact: Jim Manley
(202) 224-2633

Senator Edward M. Kennedy was joined today by Senators Daniel Akaka and Daniel Inouye in announcing a plan to reduce racial and ethnic disparities in health care and health outcomes. This bipartisan bill will also be introduced in the House by Representatives John Lewis, Charlie Norwood, Bennie Thompson, and Jesse Jackson Jr.

Senator Kennedy is also are very pleased to have the support of Dr. David Satcher, Surgeon General, Dr. Louis Sullivan, President of Morehouse School of Medicine and former Secretary of the Department of Health and Human Services in the Bush Administration, and Dr. Harold Varmus, Director of the National Institutes of Health. "This is a critical contribution to the Department's efforts to eliminate racial and ethnic disparities in health by the year 2010," said Surgeon General Satcher.

"Racial and ethnic health disparities are undermining the health of our minority communities," said Senator Kennedy, who cited a series of recent reports on this problem:

- In October 1999, a study published in the New England Journal of Medicine found that African American patients with lung cancer tumors small enough to be surgically removed were treated surgically in only 64 percent of cases, compared with 77 percent of white patients being treated surgically. As a result, African Americans have only a 26 percent chance of surviving lung cancer, compared with a 34 percent survival rate for whites.
- In the same month, the Kaiser Family Foundation released a national survey showing that minority groups have concerns about the quality of the health care they are receiving. The survey found that 64 percent of African Americans and 56 percent of Hispanics believe they receive lower-quality health care than whites.
- In August 1999, a study was published in the Journal of the American Medical Association which found that African Americans were less likely than whites to say that their doctors involve them in making medical decisions.
- In June 1999, the Commonwealth Fund released a comprehensive report of the health care experiences of minority Americans. The report found that minority Americans lag behind on nearly every health indicator, including health care coverage, access to care, life expectancy, and disease rates. In terms of health care access, 45 percent of Hispanic adults, 41 percent of Asian American adults, and 35 percent of African American adults reported difficulty paying for medical care, compared with 26 percent of white adults.
- In May 1999, a study by the University of Rochester was presented at the annual meeting

of the Pediatric Academic Society that showed that African American and Hispanic children continue to face barriers to care even after they obtain health insurance. Hispanic children were four times more likely than white children, and African American children were five times more likely than white children, to lack a usual source of health care.

- In February 1999, a Georgetown University study published in the New England Journal of Medicine found that bias in the decisions made by doctors is a factor in the treatment that African Americans receive when they suffer from heart disease. In an experiment where actors posed as patients with significant symptoms of heart disease. The physicians were asked to prescribe further interventions for each "patient," all of whom had identical medical histories, insurance coverage, and occupations. While 91 percent of the white males, white females, and African American males in the study were referred for cardiac catheterization, a more effective but more expensive diagnostic procedure, only 79 percent of the African American females in the study were referred for this test.
- In that same month, the Institute of Medicine in the National Academy of Sciences issued a report concluding that federal efforts to research cancer in minority communities are insufficient. The report recommended an increase in resources and the development of a strategic plan to coordinate this research. The results of this study confirm that while NIH has been extremely successful in producing medical breakthroughs that improve health care, those breakthroughs do not always reach into racial and ethnic communities.

"Over the past few decades," said Senator Kennedy, "we have made great advances as a nation in science and medicine. However, all our citizens have not shared in the benefits of these advances."

African Americans are 40 percent more likely to die from coronary heart disease and 35 percent more likely to die from cancer than whites. Vietnamese American women are five times more likely than white women to contract cervical cancer. Diabetes strikes African Americans 70 percent more often and Hispanics twice as often as whites. The diabetes rate for American Indians and Alaskan Natives is even higher, striking members of these communities 180 percent more often than whites. While racial and ethnic minorities make up approximately 25 percent of the total population, these groups account for over half of all AIDS cases. The disparity is even greater for African American and Hispanic women, who account for nearly 80 percent of the AIDS cases reported among women.

"Despite our knowledge of these alarming statistics, we have not made the commitment necessary to understanding how barriers to health care or genetic and behavioral differences affect the health outcomes of minority communities. In addition, we are learning that bias in the health care system is also a factor in racial and ethnic health disparities," said Senator Kennedy. "Each of these areas must be addressed in order to give these communities the fair chance for a healthy future that all Americans deserve."

Today Senators Kennedy, Akaka, and Inouye are introducing the Health Care Fairness Act of 1999 in order to secure the commitment and resources that are needed to ensure that minority communities do have a fair chance for fair care. Together, the changes that are proposed will increase our knowledge of the nature and causes of these disparities, and improve the quality and outcomes of health care services for minority populations.

Last February, the Institute of Medicine issued a report concluding that federal efforts to research cancer in minority communities are insufficient. The report concluded that more resources are needed in this area and that a strategic plan is needed to coordinate this research.

This bill establishes a Center for Research on Minority Health and Health Disparities at the National Institutes of Health. The Center will oversee the development of an NIH-wide strategic plan for minority health research. This step will enable the Congress, the communities affected by racial and ethnic health disparities, and NIH to monitor the progress of NIH in this area.

Reducing racial and ethnic health disparities will also require a better understanding of issues beyond genetic predisposition, effective treatments, and other questions of basic science. Barriers to care, poor quality health services, and the lack of useful outcome measures to assess the health of minority communities are all part of this complex problem. The Health Care Fairness Act -- Fair Care -- increases the federal commitment to understanding these social science aspects of health disparities by directing the Agency for Health Care Policy Research to conduct and support this important research.

Bias in the health care system can be reduced through increased awareness and improved cultural competency in the delivery of health services. The Health Care Fairness Act establishes demonstration projects to develop the educational tools that both new and experienced health care professionals can use to improve their cultural competency skills as well as their skills in other aspects of health care delivery that impact the care that minority communities receive.

"We all agree that reducing racial and ethnic health disparities is an important goal," said Senator Kennedy. "At the same time, we all know that achieving this important goal will require a stronger commitment than has been made in the past and additional resources to increase our knowledge, improve outreach to impacted communities, and develop quality measures to assess the progress that is being made. The Health Care Fairness Act provides these resources and moves America toward a health care system that truly provides a fair chance for the healthy future that all Americans deserve."

"I welcome the support of Senators Akaka and Inouye and Representatives Lewis, Norwood, Thompson, and Jackson in this important effort, and I look forward to early action in the Congress to pass this needed legislation."

CLOSE HOLD

THE WHITE HOUSE
WASHINGTON

March 26, 1999

MEMORANDUM FOR DISTRIBUTION

FROM: Phil Caplan

Attached for your review is one of the missing sections of the race book -- Part III: The Opportunity We Deserve.

Edits/comments to Todd Stern by COB March 30.

Devorah -

Attached is a draft excerpt from the Race Book on health disparities.

CLOSE HOLD

basic framework within which businesses compete. American consumers understand this. A *U.S. News and World Report* poll showed that six in ten Americans are concerned about working conditions in U.S. companies. *Newsday* further reported that 83% of consumers would be willing to pay an extra dollar on a $20 item if they knew the garment had not been made in a sweatshop.

Finally, I applaud citizen efforts to combat worker exploitation, such as that of the Duke University student organization Students against Sweatshops. These students developed a groundbreaking policy on licensing contracts which could have a profound impact on reducing abuses. I encourage all educational institutions and professional and professional and amateur sports leagues to voluntarily adopt a code of conduct with which all manufacturing licensees must comply.

- **Combat discrimination in health care**

Someone once asked, what good are civil rights, if the people are too sick and tired to take advantage of them? That is why improving the health care of people of color must be a leading civil rights issue in the new century. The racial disparities in health status are well documented. (See text box.) The underlying causes include poverty, lack of access to quality health services, environmental hazards in homes and neighborhoods, and the absence of effective prevention programs tailored to specific

community needs.

But, health disparities are also a function of discrimination—a subject we have been reluctant to discuss. As David Barton Smith, director of the Healthcare Management Program at Temple University noted, "The solution [to the health care divide] that we seem to have drifted into is not to talk about race." Yet, all too frequently, discrimination, either prevents minorities from getting access to health care altogether, or forces them to accept health care delivery systems that, while not separate, are entirely unequal.

Health Disparities

- A baby born to an African American mother has twice the risk of dying in the first year than a white baby. An American Indian baby is 1.5 times more likely to die.
- African American men suffer from heart disease at nearly twice the rate of whites.
- Cervical cancer is nearly five times more likely among Vietnamese American women than white women. Liver cancer among Vietnamese Americans is more than 11 times higher than whites.
- Diabetes in African Americans is approximately 70 percent more common than in whites; and the prevalence in Hispanics is nearly double that of whites.
- Hispanic children are five times more likely to be without a usual source of health care than white children.
- Hispanics of all ages are the most likely to be uninsured. Nearly three in 10 Hispanic children have no insurance coverage.

Discrimination in health care delivery has been well documented, both in research and through the enforcement activities of the Office for Civil Rights (OCR) at the Department of Health and Human Services (HHS). Evidence shows that even when factors such as education, insurance, income, and access to quality health care services

are held constant, there are still disparities in the outcomes between whites and minorities. A recent Georgetown University study vividly highlighted the problem, showing that *the race and sex of hypothetical patients had a significant effect on the treatment decisions of the physician.* Georgetown University researchers documented that physicians would refer African American women for heart catheterization significantly less often than they would refer identically situated white men. This study suggests that race and gender independently influence how physicians manage chest pain. The quality of health care was color-coded.

This is a persistent problem, and as we struggle in the larger arena of health system improvements, we must not lose sight of it. Recent OCR settlements have uncovered a number of issues, including:

—***Medical redlining.*** OCR negotiated a settlement agreement with a national home health agency that had instructed employees that they were not required to provide service to persons residing in predominantly minority areas of New Haven, Connecticut, because these areas were designated as "unsafe."

—***Segregation.*** OCR negotiated corrective action in a New York City hospital which had segregated maternity wards, with one floor serving predominantly minority patients and the other, non-minority patients.

—***Language minority patients.*** OCR negotiated an agreement with a University hospital in Philadelphia, Pennsylvania whose inadequate language assistance practices had resulted in serious problems for a Hispanic woman who came to the Emergency Room with vaginal bleeding and lower abdominal pain due to her high risk pregnancy.

—***Access.*** OCR negotiated an agreement with a hospital in a Texas border town which provided its security personnel with uniforms similar to the uniforms worn by the U.S. Border Patrol. In the settlement, the hospital agreed to discontinue the use of the uniform, which had the effect of discouraging the local Hispanic population from using the facility.

Bridging the health divide is both a public health and civil rights challenge. Unless the role of discrimination is understood, it will be impossible to eliminate the disparities. At the same time we work to improve the overall health of the American people, I have committed the nation to an ambitious goal of eliminating, by the year 2010, the racial and ethnic disparities in six areas of health status: infant mortality, cancer screening and management, cardiovascular disease, diabetes, HIV/AIDS, and immunizations.[31] Eliminating these disparities will require a comprehensive strategy involving public health experts, civil rights groups, community leaders, medical professionals, and the private sector. The United States Surgeon General is leading the effort on the public health front. We must bolster that effort with an equally aggressive

enforcement initiative to eliminate discrimination in health care. Here's how I propose we do it:

First, in any legislation establishing a Patients' Bill of Rights, I will support the inclusion of civil rights protections that safeguard against discrimination contributing to health disparities. Second, we must ensure the aggressive enforcement of existing anti-discrimination laws. In fiscal year 1999, for the first time in seven years, we secured for OCR a budget increase greater than a basic inflationary adjustment. Despite this increase, the current funding level for OCR is less

Improving Care Through Increasing Opportunity

In 1997, the Moses Cone Health System in Greensboro, NC received a grant from the National Surgical Adjuvant Breast and Bowel Project to increase minority cancer patients' access to clinical and prevention clinical research trials. During this same period of time, several African American physicians began to emphasize the apparent opportunity gaps for minority physicians within the system. For instance, very few African Americans were part of the senior management team, sat on the important committees, or were included in the newer physical contracting alliances. Subtle differences existed as well, including the perception of disparate treatment on the part of hospital personnel and with regard to access to unassigned patients. In response, the hospital's health systems administrators and physicians came together to resolve these outstanding problems. This has resulted in several concrete outcomes. For example, the hospital learned from meeting regularly with African American physicians that some sickle cell patients in the community were dissatisfied with the quality of their care. Because the relationship between the hospital's African American physicians and Moses Cone management had been strengthened by their regular meetings, the two groups were able to come together, along with the Sickle Cell Disease Association of the Piedmont, to improve patient care. Today, sickle cell patients report better overall satisfaction. Moses Cone has also dramatically reduced the inpatient length of stay by opening an 8-hour short-stay unit. Moses Cone has also dramatically reduced the inpatient length of stay by opening an 8-hour short-stay unit—from 10.5 days in FY98 to 6 days for the first six months of FY99. In the same time period, there has been a 33% reduction in in-patient admissions as a result of the new program. As a result of African American physicians and Moses Cone management working together, patients have benefited and the hospital has gained both financially and programmatically.

than the level at which the office was first established, and further investments are needed.

Third, the federal government must do more to educate all our citizens about their health care rights. All too frequently, victims of discrimination in health care do not realize that they have been victimized as such discrimination is extremely subtle. We also have a responsibility to work with health care providers. The rapid growth of managed care raises distinct civil rights concerns, especially in connection with Medicaid managed care programs that involve populations who are disproportionately minority, and who frequently have limited English proficiency. I have asked HHS to develop a civil rights best practices guide for managed care providers that would assist them in complying with their civil rights obligations.

Finally, we need to foster change at the so-called point of service, improving the relationships between patients of color and their health care providers. I am calling on hospitals, HMOs, medical schools, and other institutions that train health care professionals to establish formal training programs which will foster cultural sensitivity. The University of Wisconsin Medical School offers such a course to medical students, in which sensitive issues of race are discussed openly. Other institutions should follow suit. Moreover, the discrimination documented by OCR and in the medical literature reinforces the compelling need to ensure that the health care profession reflects the ever

increasing diversity of the population. I commend the efforts of the Association of American Medical Colleges to ensure the enrollment of 3000 minority students in medical schools by the year 2000. Similar programs are needed throughout the health sciences.

Clearly, discrimination is one of the factors, along with the economic gap and the empathy gap, for our health care divide. Eliminating discriminatory barriers to health care for minorities is not only a legal requirement, it is a moral imperative. I call on our schools, health care professionals, and Americans everywhere to work together to make equality in health care a civil rights issue in the coming years.

- **Ensure that every American lives in environmentally safe and healthy communities.**

In 1997-98, a group of residents in Convent, Louisiana, were engaged in just about the biggest fight of their lives. A multinational corporation was threatening to build a $700 million plastics manufacturing plant next to the small, mostly black, low-income community. The factory would produce polyvinyl-chloride (PVC), a plastic resin used in tubing, piping, and a variety of other products. But the factory would also release 3.6 million gallons of wastewater each day and six hundred thousand pounds of toxic emissions annually into the Mississippi River.[32] Citizens of Convent were already

living under adverse environmental conditions. Many of them kept their doors and windows closed to avoid the area's air pollution. Even so, asthma and other respiratory problems were common. The residents feared that the plant would add to these air pollution woes. The town already had seven manufacturing facilities and there were seventeen in the county.[33] This concentration of industry, plus the array of hazardous-waste incinerators, oil refineries, and landfills that lined this stretch of land between Baton Rouge and New Orleans had earned this area the nickname "Cancer Alley" due to the unusually high levels of certain health problems. [34]

The company had already received permits from the Louisiana Department of Environmental Quality, and state agencies were unmoved by the community's concerns, so the residents turned to the protections of Federal civil rights and environmental laws. With the help of the law clinic at Tulane University, they went to court and to the federal Environmental Protection Agency. On behalf of "St. James Citizens for Jobs and the Environment" and other local groups, Tulane filed petitions under the Clean Air Act to revoke the plant's permits. They also filed a complaint with EPA under Title VI of the Civil Rights Act of 1964, claiming that the community was being subjected to discrimination in the process of siting the factory.

The civil rights and environmental issues were complex and divisive. The PVC plant did threaten new emissions, but was far cleaner than any of the numerous plants

already operating in the immediate area. In its review, EPA had to consider not only the impact of the new plant, but the historical burden of toxic emissions from facilities that had been permitted over decades. And opinion in Convent was split, because the plant meant 255 new jobs and additional benefits for a community where 40 percent of the residents lived below the poverty line[35] and unemployment hovered at 62 percent.[36] With these stakes, many residents and even the local chapter of the NAACP embraced the PVC project.[37]

Before these issues could be resolved, however, the company announced that it was shifting the proposed location of its plant to elsewhere in Louisiana and were scaling down the scope of the facility,[38] so that by late 1998, it appeared that the plant opponents had won their battle.

Why should we care about this story? The battle in Convent typifies the challenges facing too many communities of color across the country as they confront decades of neglect and systematic exclusion from the government decisions that together have left their communities blighted and their health threatened. It illustrates the false and dangerous choice that is all too often given the powerless: take joblessness, or take an unfair environmental burden. Stories like Convent's are a warning to us that unless we lift the toxic burden that these communities have borne unjustly and for too long, the

battle lines will be drawn again and again in other communities determined to overcome this insidious legacy.

Th residents of Convent were engaged in a new civil rights struggle: the struggle for "environmental justice." For me, that term means ensuring that every citizen enjoys equal protection not only under the nation's civil rights laws but under its environmental laws as well. In this sense, issues of environmental justice need to be understood as far more than local siting disputes.

Communities of color have often been left out of environmental impact decisions—decisions that affect their health and the health of their children. Even more commonly, they have not been considered when funding, enforcement, research or other priorities are set. Moreover, since regulators usually tackle problems on a piecemeal basis, looking at impacts one smokestack at a time, the system often fails to look at the cumulative toxic burdens imposed on communities where there are multiple sources of pollution.

Underlying these disadvantages, too, has been the lingering assumption that it is fair to ask poor and minority communities to subordinate their right to a clean and healthy environment for the sake of needed jobs and investment. This is extortion. "You want jobs? Then be our dump."

We must not leave in place so debilitating an obstacle to equal opportunity. For example, race and income remain all too reliable as indicators of children's health, and many of the most serious health threats are directly linked to environmental quality. Asthma, which is a major cause of school absences among children, provides perhaps the most compelling example. A 1998 study by the American Lung Association reported that the incidence of childhood asthma is almost twice as high for blacks, and three times as high for Puerto Ricans as for whites.[39] We know that air quality, both indoors and outdoors, is closely linked to the asthma attacks that keep children out of school, and that minority communities are disproportionately exposed to unhealthy air.[40] Our efforts to close the racial gap in educational achievement is made more difficult because the environmental health gap produces illnesses and absences that can drag down achievement for some kids.

Lead poisoning provides another striking example. We know the devastating effects of childhood lead poisoning on intellectual capacity and educational prospects. Unfortunately, we also know that despite our overall success in reducing childhood lead poisoning, minority communities continue to suffer far higher rates. Toxic burdens similar to lead poisoning too often remain invisible, so the damage they do to lives and to opportunity is too little noticed. But we can see the illness gap, and we must act.

Environmental degradation is a significant factor steering investment away from many communities of color, and contributes to the flight from metropolitan areas that isolates an underclass in many of our inner cities. Environmental conditions also affect the incidence of crime. When police take steps to stop polluters from using streets and vacant lots of poor neighborhoods as dumping grounds for toxins, it helps stop the cycle of collapse that feeds other crime in the community.[41] I have pressed Congress to strengthen the tools available to law enforcement in fighting the environmental crime that plagues these communities.[42]

But there is more. Part of our challenge in the years ahead is to give communities new tools to erase the legacy of toxic burdens they face. And no leader—federal, state, local, civic or corporate—should be uncertain about what needs to be done. Reducing the epidemic rates of asthma in communities of color must be a public health priority. We also must accelerate cleanup of toxic waste sites and expand the community's right to know about toxic emissions in their neighborhoods. And we need to provide new resources for urban parks and open space in low-income and minority communities, which too often lack these essential amenities of community life.

We also need to develop better models for government, ensuring that communities have a voice in the decisions that affect them. Early in my Administration, I asked the Federal government to take the lead in meeting this

challenge. I am proud to have signed an executive order titled, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations." This new measure provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." [43]

As a result of my Executive order, the federal agencies have broadened the way they think about the impacts of major projects, collaborating in new ways with other levels of government and with community groups. For almost 30 years, the federal government has been required to assess the environmental impacts of its actions. The National Environmental Policy Act called upon the government to stop and think about what effect a federal project—a highway, or a dam, for example—might have on the environment. The law required agencies to consider socioeconomic impacts as well, but this mandate was never fully honored and disproportionate impacts on low-income and minority communities too often were ignored. Those impacts cannot be ignored any longer.

What lessons does the battle in Convent teach us? First and foremost, it reminds us that we can ignore issues of environmental justice only at the risk of racial conflict and racial tension. It reminds us of the importance of Federal leadership in ensuring

equal protection under our civil rights and environmental laws. And it reminds us that local people must have a place at the table when decisions affecting their environment and their health are made. Many people concerned with the environment, land use, development and public health may not have thought of themselves as civil rights workers, but in a very real sense they must be.

Finally, Convent reminds us that the cause of environmental justice is inseparable from the cause of economic justice. The battle over the PVC plant was too often presented in the press as a false choice between jobs and environmental protection. But across the Nation, we have shown that we can have the strongest economy in the world while insisting on the strictest environmental standards. We have shown that environmental protection is an essential component of economic growth. This is true across America. Communities will only attract the jobs and investment they need if they are healthy places to raise families, go to work, and go to school. The activists in Convent reminded us that, in America, no community should be forced into having to choose between their health and their jobs.

- **Ensure an accurate Census, because every American counts**

Because the accuracy of the U. S. census directly affects our nation's ability to ensure equal representation and equal access to important governmental resources for all

Americans, I regard a fair and accurate census to be one of the most significant civil rights issues we face. Article I of the Constitution places the census count at the core of our democratic system of governance.[44] The first census was conducted in 1790, when Secretary of State Thomas Jefferson reported to President George Washington an official count of 3.9 million people. This count included American Indians who were not taxed and "three-fifths of all other persons," meaning slaves.[45] As in 1790, we continue to undercount racial minorities – by about *12 million* in the census of 1990.

A Sample of Programs Affected by Census Figures

HEALTH CARE. Head Start. Health Education and Training Centers. Nursing Student Loans. Protection and Advocacy for Individuals with Mental Illness. **EDUCATION**: Goals 2000 -- State and Local Education Systematic Improvement Program. Safe and Drug Free Schools. Technology Innovation Challenge Grants. Title I Program for Neglected and Delinquent Children. Special Education. Indian Education. Education for Homeless Children and Youth. Health Professions Student Loans. **ENVIRONMENT**. Wildlife Restoration. Air Pollution Control Program Support. Water Pollution Control. Hazardous Waste Management State Program Support. **TRANSPORTATION**. Capital Assistance Program for Elderly Persons and Persons with Disabilities. Airport Improvement Program. Highway Planning and Construction. State and Community Highway Safety. **CHILDREN**. Child Welfare Services. Childcare for Families at Risk of Welfare Dependency. Child Abuse and Neglect. **SENIORS**. In Home Services for Frail Older Individuals. Programs for Prevention of Elderly Abuse, Neglect, and Exploitation. Nutrition Services. Independent Living Services for Older Individuals Who Are Blind. **INDIVIDUALS WITH DISABILITIES**. Disabled Veterans Outreach Program. Block Grants for Community Mental Health Services. Supportive Housing for Persons with Disabilities. **WOMEN**. Violence Against Women Formula Grant. Maternal and Child Health Services Block Grants. Rural Domestic Violence and Child Victimization Enforcement Grant Program. **RURAL COMMUNITIES**. Appalachian Local Access Roads. Rural Telephone Banks. Rural Electrification Loans and Loan Guarantee. Rural Self-Help Housing Technical Assistance. Rural Domestic Violence and Child Victimization Enforcement Grant Program.

An accurate census is critical to all Americans as it is the basis for virtually all demographic information used by

policy makers, businesses, and community leaders. Census data directly affects decisions made on all matters of national and local importance, including the development of education, employment, veterans' services, public health care, rural development, environment, transportation, and housing programs, as well as the distribution of hundreds of billions of dollars in critical services. Last year alone, the federal government distributed over 180 billion dollars in federal aid based on census data.

In addition to the funding of critical services, census data also forms the basis on which congressional seats are reapportioned and legislative districts are drawn. Inaccurate data thus has far-reaching consequences for political representation by decreasing the influence of those persons who are less frequently counted.

In 1990, the differential undercount, including the undercount of racial and ethnic minority groups, was the highest ever since the Census Bureau began conducting post-census evaluations in 1940. In fact, the total miscount was over 12 million people,[46] the equivalent of not counting the entire population of Ohio, Michigan, or most of Illinois. The undercount of minorities was even worse than the national average; the 1990 count missed 4.4 percent of African Americans, 5 percent of Hispanics, 2.3 percent of Asian Americans and Pacific Islanders, and over 12 percent of Native Americans living on reservations. This means that the undercount rate for African Americans was six times

greater, the rate for Hispanics seven times greater, and the rate for American Indians more than seventeen times greater, than that for whites.[47] Children were also badly miscounted. While children under the age of 18 represented 26 percent of the total national population that year, they accounted for 52 percent of those missed. As a result of this inaccuracy, many individuals were denied an equal voice in their government, or denied their fair share of government resources.

Why were people of color disproportionately undercounted? Experts at the Census Bureau and from panels convened by the National Academy of Sciences found that residents of census tracts with high undercounts shared a number of characteristics: high mobility, language barriers, high level of unmarried residents, nontraditional housing arrangements, neighborhoods that are not trustful to outsiders, and a lack of trust in the confidentiality of the census.[48] These characteristics are commonly found in communities of color. Because we know what the obstacles are to achieving an accurate count, we can address them. We can make every person count.

First, let's take advantage of our scientific knowledge. In order to prevent future undercounts, Congress passed and I signed the Decennial Census Improvement Act.[49] This Act authorized the Census Bureau to work with the National Academy of Sciences to determine the best way to count our population.[50] The panel of experts convened by the Academy unanimously recommended the use of scientific sampling as part of

Census 2000.[51] In fact, they concluded that traditional methods alone would not reduce the undercount: "It is fruitless to continue trying to count every last person with traditional Census methods of physical enumeration."[52] The nation's leading statistical associations, including the American Statistical Association and the American Sociological Association, have also endorsed the use of sampling.

There has been much confusion about the legality of sampling as a counting method due to a misreading of the Supreme Court's decision in *Department of Commerce v. United States House of Representatives*. The Supreme Court ruled that sampling is prohibited only for apportionment purposes. Thus, we will improve upon our traditional direct counting methods to apportion the 435 Congressional seats among the 50 states. The Court, however, made it clear that the 1976 amendments to the Census Act "changed a provision that permitted the use of sampling for purposes other than apportionment into one that required that sampling be used for such purposes if 'feasible.'"[53] If the Secretary of Commerce deems it so, we *must* use statistical sampling to adjust the census data for use in redistricting and distributing funds. Secretary of Commerce Richard Daley has already determined that statistical sampling is necessary, desirable, and feasible. Thus, we must take advantage of modern scientific methods to make sure that every person in America counts.

In addition to the use of statistical sampling, we can improve our education and outreach. First, we will communicate with every home three times: to alert residents that census forms will be arriving soon, to deliver census forms, and then, to remind all households to return the census form. We know, however, that less than two-thirds of all households are likely to mail back their forms. That is why we are sending approximately 250,000 temporary census takers to go door to door to follow-up with households that have not responded to the mailing. Also, for the first time in history, the Census Bureau will sponsor a national advertising campaign urging all Americans to participate in the census. We will target some of these ads to hard-to-count communities. Finally, as Karen Narasaki, Executive Director of the National Asian Pacific American Legal Consortium, pointed out in her testimony before the U.S. Commission on Civil Rights, we must recognize the growth of immigrant communities and provide language assistance. We will distribute census forms in a variety of languages as well as provide a toll-free number staffed with multi-lingual operators to assist people with their forms.

Our most important concern for Census 2000 should be accuracy, not politics. Let's use our scientific advantage to make sure that we count each and every American, and improve our education and outreach efforts. Because our federal resources, voice in government, and economic life are based on a fair and accurate census, let's not repeat another undercount. The accuracy of Census 2000 and each decennial census after it

will be an important indicator of our willingness to protect the civil rights of all Americans.

*

E. PREVENT LAW VIOLATIONS BY REDUCING RACIAL TENSIONS AND PROMOTING RECONCILIATION

Finally, I want to talk about what the federal government is doing—and what other levels of government can join in doing—to help communities and neighborhoods ease racial tensions. In 1959, Senate Majority Leader Lyndon Johnson first introduced the idea of establishing a federal agency to assist communities in restoring and maintaining racial peace: "It could be one of the longest and most far reaching steps toward an ultimate solution of the civil rights issue that could be taken," he said. Five years later, President Lyndon Johnson signed into law the Civil Rights Act of 1964, which included in it the authority to create the Community Relations Service (CRS).[54] The bill was a rejoinder to the disappearance of Mickey Schwerner, Andrew Goodman, and James Chaney in the little Delta town of Philadelphia two weeks earlier, and a cry against the 80 beatings, 35 shootings, 35 church burnings, and 30 burnings which took place in Mississippi in the summer of 1964.[55] It reflects our nation's willingness to use