

SUPPLEMENT TO

**M A N A G E D**

# Care

## The Future Of Public Health What Will It Take To Keep Americans Healthy and Safe?

Based on a symposium at the University of the Sciences in Philadelphia,  
May 10, 2005

### HIGHLIGHTS

3 Perspectives on the Challenges Ahead

- Which Road Will Public Health Take?
- Funding and the Mechanisms of Change
- Preventive Care Is Key

### PANEL DISCUSSION

Challenges in improving the health of all Americans

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## INTRODUCTION

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The future of public health would have interested few people, outside of a relatively small circle of health care policy-makers, just a few years ago. Even much of the medical profession saw it as a peripheral concern. Then came AIDS, anthrax, SARS, West Nile virus, and a range of other infectious threats of which we are now keenly aware. We also are increasingly conscious of how chronic diseases such as diabetes, hypertension, and asthma take an even greater toll on our health, although some of the causes, like smoking and obesity, are largely preventable. Population-based health care is clearly essential in keeping us all healthy and safe.



The first public health departments functioned at the state and local levels. They were confined largely to treating infectious diseases, with some attention to maternal and child health. Today's public health system is a national network with a broad focus that cuts across all levels of government. It addresses an array of challenges, including chronic diseases, mental health, substance abuse, traumatic injuries, environmental and occupational health, and, more recently, bioterrorism. The infrastructure required to respond to these challenges must include a highly skilled workforce, sophisticated information and data systems, an intricate organizational capacity, and substantial funding. The challenge to policymakers is great.

Beyond these immediate challenges to public health policy, as considerable as they are, there is a looming threat that may dwarf them all. With increased life expectancies, older Americans will consume an ever-growing share of health care dollars, but with a smaller proportion of working-age Americans to provide financial support. Population-based prevention of chronic illnesses that are characteristic of older adults, rather than individual treatment, is the only approach to maintaining the health of large numbers of Americans into their later years that will be economically viable. The scientific, demographic, and economic forces that are converging could well lead public health to preempt clinical medicine in the decades ahead as the primary focus of American health care. The sooner we begin to frame its needs and concerns, the better we can meet the challenges ahead.

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## OVERVIEW

# Public Health: Community and a Shared Future

Kristine M. Gebbie, DrPH, RN



**Public health works**  
only if all Americans  
understand that they  
share a future.

— Kristine M. Gebbie,  
DrPH, RN

The vast majority of health professionals in this country is actually in the sick-care business. Our current focus as a nation on the cost of illness care, unfortunately, has overshadowed our attention to true health care. Moreover, those health professionals that work in public health do so with little public awareness of their efforts.

The scope of public health is very broad, addressing issues ranging from motor vehicle safety to childhood immunization. I was attracted to public health because of my interest in mental health. My colleagues may have entered the field because of their interest in children or infectious diseases. Whatever the initial motivation, all public health professionals are united in wanting to take action early to reduce threats to health before problems emerge.

The language of public health generally describes a set of services and the regulatory authority that supports those services. Services include surveillance and investigations to learn what is happening to the public's health, using public information and community education programs to inform the public, and helping community organizations to develop policies. The regulatory authority enables public health professionals to provide access and delivery, making certain that quality and effectiveness are maintained, and doing the research that informs all of our activities.

Successful pursuit of public health requires an understanding of community and a shared future. It also requires a degree of enlightened self-interest, and acceptance of the role of government to achieve goals. Our public health system operates on many levels of government. Because health issues respect no geopolitical boundaries, federal leadership is absolutely critical, even though federal support for population-focused public health programs accounts for a mere 3 percent of total federal health-related expenditures. The organizational focus of public health occurs at the state level, supported primarily by state laws. But people live in local communities, and it is in those communities that we need to find a way for public health to connect with the people it serves. Although government's presence in public health is an important structural tie, it takes cooperation by each local community to achieve public health.

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*Kristine M. Gebbie, DrPH, RN was co-chair of the Institute of Medicine Committee on Educating Public Health Professionals for the 21st Century which, in 2003, issued an influential report on the nation's public health training needs. She is currently associate professor at the Columbia University School of Nursing. Gebbie has also served as senior consultant for Public Health Initiatives to the Office of Public Health and Science in the United States, Department of Health and Human Services. She was previously secretary of the Department of Health for the state of Washington.*

## INTRODUCTORY REMARKS

# Meeting the Challenges Ahead: 3 Panelists Discuss the Current State Of Public Health and Strategies For Improvement

**P**ublic health in the United States is the responsibility of a network of some 3,000 federal, state, and local governmental health agencies that, together with business, voluntary, and professional health associations, provide basic health services to all Americans. The four pillars of public health — prevention, science, care for the medically underserved, and interdependence — define its purpose and its role in protecting our nation against the threat of disease, epidemics, and bioterrorism.

*In this section, three experts discuss the state of public health today, the critical challenges that must be met to keep Americans healthy and safe, and strategies for improving our public health system. Their biographies are listed in the order in which they spoke at the symposium.*

**C. Earl Fox, MD, MPH**, is director of the Urban Health Institute at Johns Hopkins Bloomberg School of Public Health. He was administrator of the Health Resources and Services Administration (HRSA), the federal agency responsible for national health manpower planning and community health, from 1997 to 2001. The agency administers training grant programs, supports community health centers, funds services for people living with HIV/AIDS, and assists in improving services to mothers and children.

**Jeffrey P. Koplan, MD, MPH**, is vice president for academic health affairs at The R. W. Woodruff Health Sciences Center at Emory University. He was director of the Centers for Disease Control and Prevention, the primary federal public health agency, from 1998 to 2002. He has worked on most major public health issues, including infectious diseases such as smallpox and HIV/AIDS, environmental health, tobacco use, and chronic diseases, both in the United States and internationally.

**James S. Marks, MD, MPH**, is senior vice president and director of the Health Group at The Robert Wood Johnson Foundation. He was director of the National Center for Chronic Disease Prevention and Health Promotion of the Centers for Disease Control and Prevention from 1995 to 2004. In that role, he advanced systematic ways to address the nation's growing epidemic of obesity, reduce tobacco use, and prevent chronic diseases such as cancer, heart disease, and diabetes.

**Kristine M. Gebbie, DrPH, RN**, moderated the panel discussion.

**Barbara J. Plager, MS**, adjunct assistant professor of health policy at the University of the Sciences in Philadelphia, recruited the speakers, coordinated the presentations, and informed the public of this important symposium.

The issue report “Shortchanging America’s Health — A State-By-State Look at How Federal Public Health Dollars Are Spent,” published by Trust for America’s Health, February 2005, was distributed to symposium attendees. Trust for America’s Health is a nonprofit, nonpartisan organization that is active in community health and disease prevention. The following chart is based on information provided in the publication, p. 6.

### **Major public health threats – 2005 and beyond**

- 1.** Potential threat of biological, chemical, and radiological terrorism.
- 2.** Natural disaster response — assisting the injured and containing disease as a result of natural disasters, such as hurricanes, tornadoes, floods, fires, chemical spills, and accidents.
- 3.** Infectious diseases — West Nile virus and Norovirus outbreaks, mad cow disease, foodborne pathogens, Asian flu pandemic, flu vaccine shortage, decreased rate of immunizations (20 percent of pre-schoolers do not receive all recommended vaccinations).
- 4.** Growing prevalence of cancer, heart disease, diabetes, asthma, and other chronic diseases across all age groups.
- 5.** Sixty percent of Americans are now considered overweight or obese.
- 6.** Twenty percent of Americans experience mental illness in a given year. More than 9 percent of the population has a substance abuse problem.
- 7.** Environmental threats.
- 8.** Increasing public violence.

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SOURCE: TRUST FOR AMERICA’S HEALTH  
«WWW.HEALTHYAMERICANS.ORG»

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# Public Health: Which Road Will It Take?

Jeffrey P. Koplan, MD, MPH

**W**ith its lengthy record of accomplishments, our public health system has the ability to deal with the many challenges it now faces. The question, however, is whether public health will be permitted to continue to pursue its mission.

## A brilliant past

During the 20th century, public health in this country made incredible advances that led to a dramatic increase in longevity. Today, the average American's life expectancy at birth is approaching 80 years — a 40-year increase over the average in 1900, when diseases of infancy and childhood took a high toll. At the beginning of that century, infant and maternal mortality rates were such that pregnancy was a dangerous undertaking. Food- and water-borne illnesses were common. The nutrient content of foods was poor. For example, in parts of Pennsylvania, rates of goiter were high, owing to iodine deficiency. In the south, rickets occurred in 10 percent of the children, and pellagra (iron deficiency) was common. We now associate these conditions with underdeveloped countries; but, they were a fact of life in this country up through World War II.

In large part, the accomplishments of public health initiatives did not stem from major scientific advances. Rather, the credit goes, primarily, to broad-based public health programs that involved epidemiology (for example, the recognition that tobacco use leads to a series of chronic diseases and high death rates); public health education and communication; and policy intervention. These low-technology programs not only resulted in a huge saving of lives — they also improved the quality of life. Control of infectious diseases is another major triumph, accomplished through improved sanitation and the widespread use of antibiotics and vaccines.

## Progress continues

The accomplishments of public health have not ended. We still see positive changes in important indicators and diseases. Until recently, *Haemophilus influenzae* serotype B (Hib) was a major cause of childhood meningitis, along with cellulitis, arthritis, and sepsis. Hib disease resulted in death in 3 to 6 percent of cases, and permanent hearing loss in up to 20 percent of survivors. Today, Hib disease is almost eradicated, owing to the routine use since 1990 of the Hib conjugate vaccine. During the prior decade, the incidence of Hib disease ranged from 40 to 100 cases per 100,000 U.S. children aged less than 5 years. Today, the incidence of invasive Hib disease is only 1.3 cases per 100,000 children, and it has been virtually eliminated as a cause of meningitis.

Another public health success story is the recent decrease in spina bifida and other neural tube defects because of the requirement, as of 1998, that manufacturers add folic acid to enriched flour and non-whole-grain products. This mandatory fortification of cereal grain products followed from a 1992 recommendation of the U.S.



**Despite its many accomplishments** and its many capabilities, our public health system today is under considerable stress.

— Jeffrey P. Koplan,  
MD, MPH

Public Health Service that all women capable of becoming pregnant consume at least 400 mcg of folic acid daily. Whereas, the estimated average annual number of pregnancies with neural tube defects had been 4,130 just a few years prior, shortly after fortification, the average annual number of pregnancies with neural tube defects declined by 27 percent, to 3,020.

### **Public health is growing**

Over the course of the past century, public health has grown both in depth and breadth. Today, it addresses a wide range of issues: all infectious diseases, including HIV/AIDS; all chronic diseases; violence; injury prevention; birth defects; and bioterrorism. Its practitioners are now more varied. In addition to the doctors, nurses, engineers, and nutritionists who hold public health degrees, the field also embraces a wide range of professionals in the behavioral and the social sciences — demographers, communications specialists, and specialists in evaluation science and decision science.

Knowledge gained through laboratory science, genomics, proteomics, biochemistry, pharmacology, epidemiology, biostatistics, and the social sciences has permitted us to do more and to do it better. Notably, all this has been done with a very low investment — just 3 percent of the total health dollar. Despite the low level of public health spending in the past several decades, the benefits generated have been immense.

### **The challenges are growing**

Minimal investment is no longer going to work. The dramatic increase in life expectancy achieved through public health efforts contributes to one of the greatest challenges facing our health care system and public health — an aging population. In the decades ahead, our oldest citizens will account for an increasingly larger proportion of the population. Depending on how well they age, they may place very different demands on both our health care delivery system and our public health system. Since 1900, when 1 American in 25 was aged 65 and older, the number has increased 11-fold, from 3 million to 35 million. Today, 1 American in 8 is aged 65 years and older. By 2030, elderly Americans will number 71 million, including 10 million people aged 85 years and older. Such striking demographic changes call for increased emphasis not on our life span, but rather our health span — the number of years during which we can enjoy a satisfactory quality of life.

During the past 5 years, the context in which the public, politicians, and policymakers view public health has changed markedly. Paradoxically, the increased focus on acute threats and security issues since 9/11 has diverted attention away from other pressing health issues, such as health disparities and environmental contamination. Moreover, we are in the midst of a war that diverts attention and resources from domestic issues. The general public and policymakers would do well to remember that the stronger the public health infrastructure is for dealing with everyday public health situations, the better equipped it will be to respond to emergency situations.

Public health leadership also has been weakened, both at the national and state levels. Homogeneity in government fails to generate the positive tensions between the executive branch and the legislative branch, or between the two political parties, that historically have permitted public health to flourish.



## Individual and societal responsibility

Today, public health is influenced by what might be termed a “conservative bent” in the country. This phrase informs the contemporary shape of public health — personal responsibility as opposed to societal responsibility as an important underlying factor in many disease states; the dominance of business and economic interests; a decrease in the quest for social equity, which is at the root of public health; and a decrease in interest in others, whether they are “others” by virtue of lifestyle, sexuality, race or ethnic group, or immigrant status.

Most of us in public health have a population perspective, seeing a place for the exercise of individual responsibility, but in balance with the environment in which individuals work, live, and make decisions. We will have a rocky trip ahead as we mix the changes in structure and environment now with us with the health challenges that lie ahead, be they the mounting obesity epidemic, which will be with us for decades to come, or tobacco and substance abuse, mental health, chronic diseases, emerging infections, antibiotic resistance, the threat of bioterrorism, and disparities among different population groups within the United States, as well as with other parts of the world.

Despite the many challenges that public health faces, I remain positive. Because of the high value we attach to good health for ourselves and our families, I am confident that in the long term, the voting public and policymakers will allow public health practitioners in local, state, and federal health departments to build upon their distinguished history of service and continue to add more years to our life span and our health span.

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# Funding and the Mechanisms of Change

C. Earl Fox, MD, MPH



**Public health never** has been adequately funded in the United States. As a society, we do not value prevention, and we feel no compulsion to provide health care services for the medically underserved. This attitude colors many of our policies at the federal, state, and local levels.

— C. Earl Fox, MD, MPH

Services that public health departments provide — such as family planning, treatment of sexually transmitted diseases and tuberculosis — are a combination of population-based approaches and direct care. Public health has operated in that fashion for decades, sometimes providing these services by design, but more often by default. I spent my first year in public health working in three counties in the South, conducting 26 clinics a month for pregnant women who had nowhere else to go for health care. They had no reimbursement mechanism for pregnancy care. Through these clinics, we provided the services needed to ensure that these women and their babies would be healthy. Although clinics like these still exist, and many public health departments continue to provide medical care, the numbers are declining.

## A burden for the uninsured

During the debate about health care reform a decade ago, all of us in public health worried about how public health would be funded. Because of concerns about lack of reimbursement, many health departments began divesting themselves of direct primary care services, and they have continued to do so.

For the president's budget for fiscal year 2006, the Health Resources and Services Administration (HRSA) has requested \$2 billion for the Community Health Centers (CHC) program. This amount represents a \$304 million increase over the funding level for fiscal year 2005. According to the HRSA, by the end of the year, the health centers "will deliver high-quality, affordable primary and preventive care to over 16 million patients at more than 4,000 sites." As their funding is currently structured, the CHCs cannot be the sole answer to meeting the needs of the uninsured. CHCs have cost-based reimbursement mechanisms. Their budgets are not adjusted annually, based on the amount of indigent care they provided the previous year. If a CHC provides \$100,000 more in caring for people who are uninsured, that health center has simply dug itself a hole of red ink from which it can't escape.

## Residencies needed in preventive medicine

Increased funding at the federal level for public health training, specifically for residencies in preventive medicine, is desperately needed. Physicians elect careers in preventive medicine not because it is highly remunerative or prestigious, but because they are committed to the highest ideals of the medical profession, and to selfless service to society, notably on behalf of its least-advantaged members.

Preventive medicine is unique among the medical specialties in requiring training in both clinical medicine and public health. By virtue of their broad knowledge, preventive medicine specialists are well qualified for leadership positions in public health settings. The number of training programs, however, has decreased from 90 in 1999 to 76 today, and the number of physicians enrolled in these programs has

declined by nearly 20 percent since 1996. For the academic year ending June 30, 2005, these programs enrolled 356 physicians — a mere 3 percent of the 104,544 residents in training.

The American College of Preventive Medicine (ACPM) lists about 500 positions available nationwide for residency training in preventive medicine. Many of these have gone unfilled because of inadequate funding mechanisms. Most preventive medicine residency programs are ineligible for support by the Medicare Graduate Medical Education funding program because they are usually based in community outpatient clinics and public health settings, rather than teaching hospitals, and preventive medicine residents typically do not provide direct medical care. Hence, these residency programs look to the HRSA Preventive Medicine Residency Training Grants Program for support — and they find it inadequate.

Title VII of the Public Health Service Act authorizes HRSA to provide funding for a few preventive medicine residency programs, among other public health training programs. Yet, the president's budget request for fiscal year 2006 eliminates most Title VII funding — including all funding for development of the public health work force.

The sum of federal money provided through the HRSA program was less than \$2 million for fiscal year 2002. It has been declining since, to \$1.4 million in fiscal year 2004. That sum sufficed to support just 25 physicians in 7 residency programs. In April 2005, the ACPM submitted a statement to a subcommittee of the U.S. House of Representatives Committee on Appropriations urging that \$5 million be allocated for preventive medicine residency training, among \$12.7 million in Title VII support for public health work force development.

### More advocacy is needed

Public health advocacy groups at the federal, state, and local levels must pool their efforts to lobby for increases in funding. As the oldest organization of public health professionals, the American Public Health Association (APHA) — representing 50,000 members working in some 50 public health occupations — is well positioned to coordinate the lobbying efforts of the public health community. I am heartened to see that in its statement submitted to the House Appropriations Subcommittee, APHA called for HRSA to receive funding of at least \$7.5 billion.

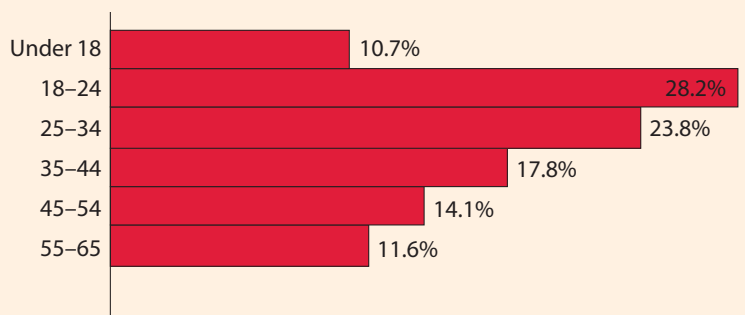
Public health is a sleeping giant. Its ability to make significant strides in the future is unlimited, provided we muster the political will to support it.

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## Health insurance coverage among persons under age 65

United States, 2002



SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION. NATIONAL CENTER FOR HEALTH STATISTICS. HEALTH, UNITED STATES, 2004  
 «WWW.CDC.GOV/NCHS/DATA/HUS/HUS04TREND.PDF#031»

# Preventive Care – the First Step

James S. Marks, MD, MPH



**Aside from clinical care,** we spend only about \$10 per person per year for public health education and policy development.

— James S. Marks, MD, MPH

**F**our principles define public health in the United States: disease prevention, a scientific foundation, care for the medically underserved, and interdependence of all sectors. In our health system, population-based disease prevention comes from public health, not clinical care. Prevention, however, lacks the priority that it deserves, especially when we consider demographic trends (see box below).

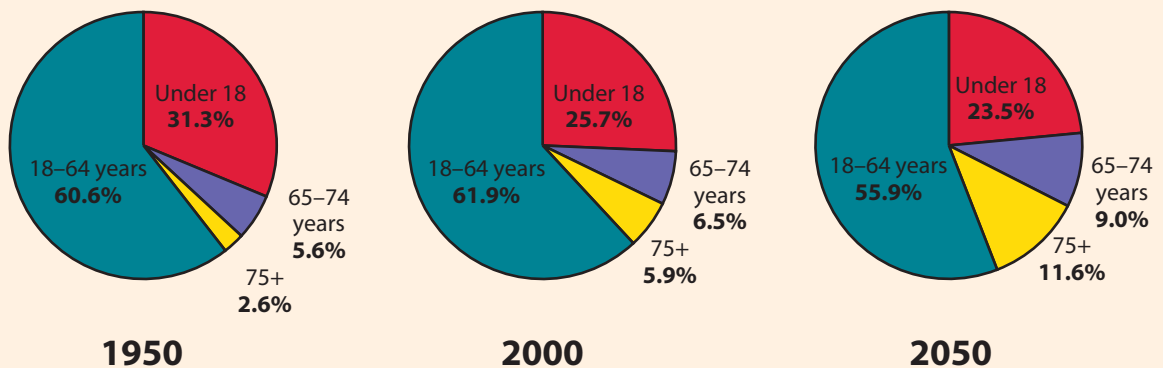
## Supporting an aging population

One of my first consultations when I joined the Centers for Disease Control and Prevention was in Tupelo, Miss., where Elvis Presley was born. In 1993, a San Francisco newspaper reported on a survey that had been done on the trend in Elvis impersonators. When he died in 1977, there were about 37 Elvis impersonators. By 1993, there was an estimated 48,000. On an exponential growth curve, by 2010 there will be 22.5 billion Elvis impersonators. Also by 2010, there will be about 7.5 billion people in the world, so two people in this audience for every Elvis impersonator, and an enormous price to support them all.

Looking at aging trends in this country, we see that a 65-year-old and above costs, in terms of life care, about four times what a 45-year-old costs. The average age of the baby boom generation is in the late 40s. By 2030, almost all members of the baby boom cohort will be over age 65, and according to the Social Security trustees, the ratio of workers to people on Medicare and Social Security will be about 2 to 1. The point is, going back to the Elvis example, that many of our current policies are based on the thinking that two people can support one in the lifestyle they both desire.

Huge changes are taking place, however. What kind of changes do we see? For one, many older adults are continuing to work to maintain their standard of living. Others may want to work because they find it fulfilling, or they may want to work part

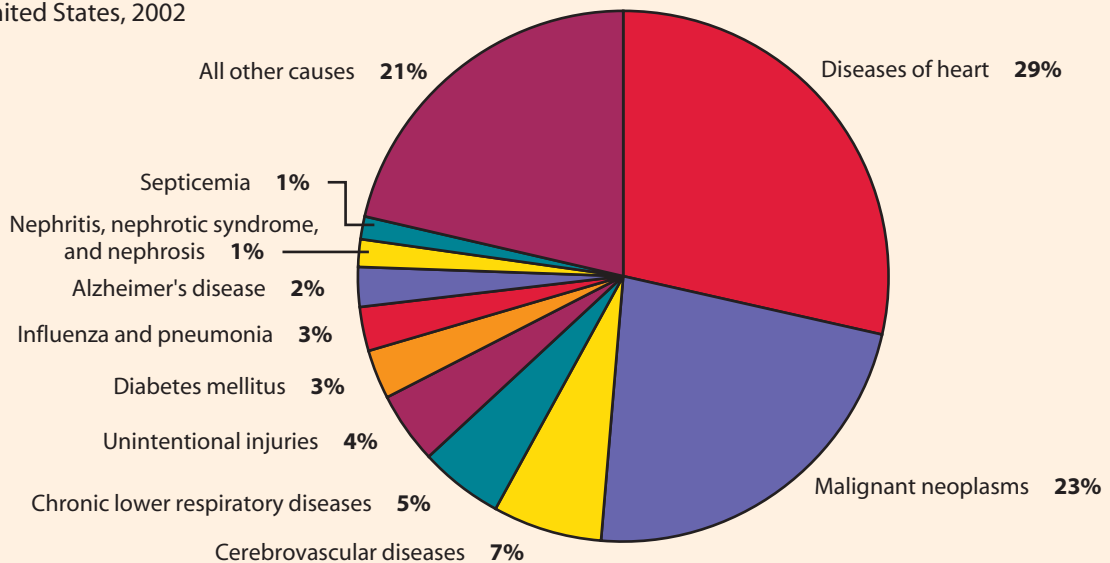
## Division of United States population by age



SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION. NATIONAL CENTER FOR HEALTH STATISTICS. HEALTH, UNITED STATES, 2004  
«WWW.CDC.GOV/NCHS/DATA/HUS/HUS04TREND.PDF#031»

## Leading causes of death

United States, 2002



SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION. NATIONAL CENTER FOR HEALTH STATISTICS. HEALTH, UNITED STATES, 2004  
«WWW.CDC.GOV/NCHS/DATA/HUS/HUS04TREND.PDF#031»

time. Some will take care of grandchildren while their parents work. Some will want to volunteer. Regardless of reason, older adults can work only if they are healthy, and health depends on preventive care.

Science is critical. Unless public health has science as its foundation, it has only an opinion. Science becomes more critical when we recognize that health care is our largest industry, and public health issues also have implications for all other industries.

Public health has a special responsibility for the medically underserved. In a country where health care is the largest industry, but where access to health care is not a right, the responsibility of providing a safety net for the underserved falls heavily upon public health, which may be why most of the public perceives public health primarily as the provider of clinical care for the poor. This leads us to the fourth principle — interdependence.

Interdependence means that no important health problem will be solved by clinical care alone, or research alone, or by public health alone — but rather by all public and private sectors working together.

### Prevention is key

We owe it to ourselves to stay healthy through preventive care. You can buy about 10 years of health if you don't smoke. If you are active and maintain your weight, the onset of disabilities can be delayed by about 10 years. Most of these gains do not come from clinical care. It is critical to us as a society that we harvest those additional years of healthy life.

The issue of personal responsibility versus societal responsibility is a major debate at the highest levels of politics. Societal policies, however, are what foster the personal choices we think are important. For example, an important part of the

American dream is for people to own their own home. To support that goal, we subsidize home ownership by making mortgage interest tax deductible. Tax policy, thus, drives people toward certain choices.

Even if we think decisions about exercise, diet, and smoking are matters of personal choice, we must strive for societal policies that foster our healthier choices. Philadelphia is grappling now with whether the city should have a clean indoor air act, even though we know that secondhand smoke causes illness, and that prohibiting smoking in public places, such as restaurants, does not lower the economic viability of those places.

Chronic diseases — cancer, heart disease, and diabetes — account for about 70 percent of the deaths in this country (see box on previous page) and 70 percent of health care costs. Yet, per person per year, we spend more for motor vehicle oil changes than for public health prevention of chronic disease. Why do we change the oil? We think our car will last longer. We think the small investment of time and money expended for preventive maintenance will forestall the far greater cost and inconvenience associated with breakdowns likely to occur if routine maintenance is neglected.

We must make better use of the resources available for our health care system. The question we need to ask ourselves is, if we had \$1.9 trillion per year (the amount of projected national health expenditures in 2005) to spend on health care, how should we spend that sum? The question is not how much repair work could we do, but how much health could we buy to enjoy a healthy life?

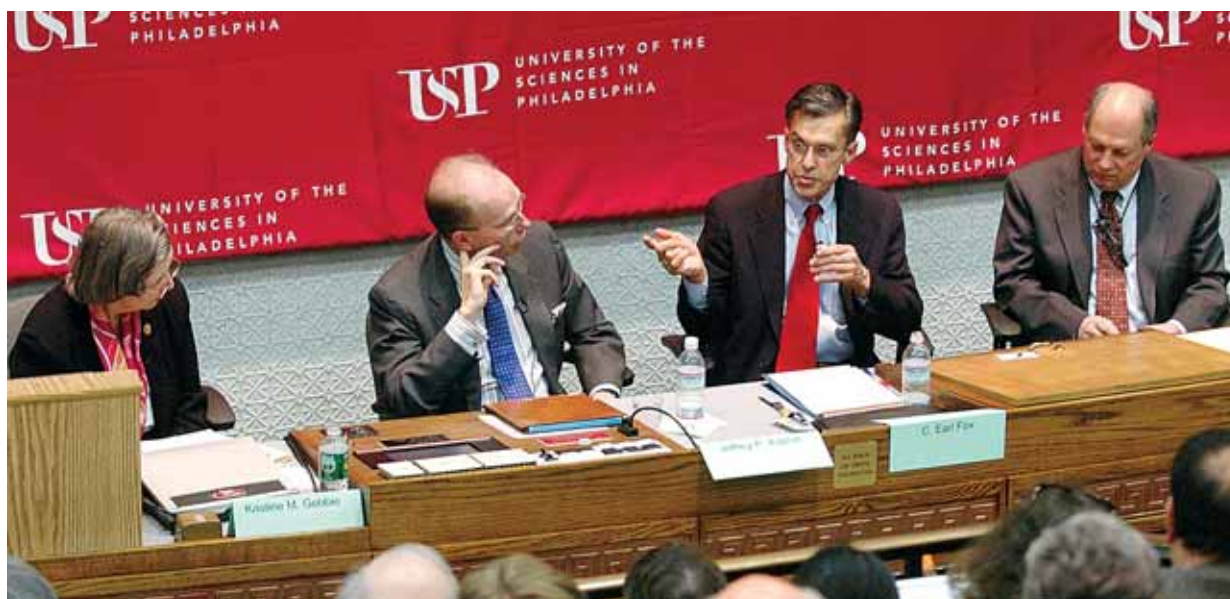
The public needs to better understand the vast potential of public health, because they have little idea of its capabilities. Those of us in public health think of health maintenance or improvement as the outcome. The public thinks of health as a means to other ends. Older adults want to maintain their independence; they don't want to be a burden to their family or to society; they want to play with their grandchildren. Their best chance to achieve this outcome is to exercise, maintain their weight, get annual flu shots, and stop smoking.

If better health is to move up on the public's agenda, the advance will occur not because those of us in public health think it important, but rather because the public thinks good health is important for the kind of life they want for themselves and their families.

## PANEL DISCUSSION

# The Future of Public Health

## Keeping Americans Healthy and Safe



**A**fter concluding their opening remarks on the current state and future of public health in America, panelists C. Earl Fox, MD, MPH, Jeffrey P. Koplan, MD, MPH, and James S. Marks, MD, MPH, responded to written questions submitted by the audience. Kristine M. Gebbie, DrPH, RN moderated the lively and informative discussion. Both the questions asked and the responses given reflect a deep concern about the role of public health, the current politicization of public health issues, and the future health care challenges that must be resolved.

**KRISTINE M. GEBBIE, DrPH, RN:** Over the past several years the largest single increase in public health funding has been for bioterrorism. If you could add \$200 million a year for the next 5 years to the public health budget, what would you spend it on?

**JAMES S. MARKS, MD, MPH:** I would spend that money on three things: First, helping the public understand what public health is, so they can see it locally and recognize that it is parks, and sidewalks, and nutrition programs in their schools. Second, helping public health systems provide better accountability to the public, so the public can see whether they're getting their services: *Can a person get a flu shot in 48 hours? Are restaurant inspections being conducted periodically?* Third, data on what is shown to be valuable should be incorporated into public health research. The federal government put a lot of money into preparedness in the last few years, but the states cut their public health budgets, so it was like pouring water

into a bucket with a hole in the bottom — public health agencies had less to spend after the preparedness dollars came than they did before. The federal sector should not be the only sector that supports public health. We must have support from the states and local sectors too.

**JEFFREY P. KOPLAN, MD, MPH:** Two hundred million is about half the cost of a new research building. What is needed is a couple billion dollars, and some strictures on what states and local health departments do with the money. In surveys we've done of the states that received some of the billions of dollars that flowed to them in the aftermath of 9/11, we found that the money is not getting down to the local health department level; it has been used largely for limited bioterrorism activities. And the states have decreased their own public health budgets, so there are perverse incentives.

**GEBBIE:** How does our spending on public health compare with that of other industrialized countries?

**KOPLAN:** It varies from country to country. At the federal level, most other industrialized countries lack as robust a public health establishment or capacities as

we have. Most have nothing comparable to the Centers for Disease Control and Prevention. They have a fledgling version of the Food and Drug Administration, and some pieces of what would be the Health Resources and Services Administration. Many countries are scurrying to create some versions of those entities. What they do have is a much more equity-based health care delivery system. That's where we see discrepancies here — in the delivery end of public health programs, whether it's every woman getting a mammogram at the right intervals, or more uniform vaccinations in some age groups.

**C. EARL FOX, MD, MPH:** The infant mortality rate in the United States is so much higher than in most other industrialized countries. During the years I headed HRSA, we spent a ton of money on kidney transplants. We virtually guarantee any-

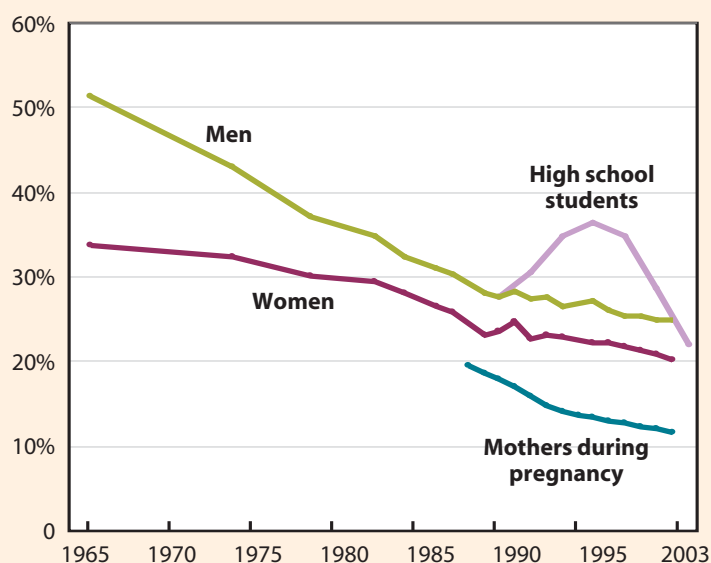
one who gets to the point of kidney failure a transplant if there is an organ available, yet we do not provide mechanisms to treat people with hypertension. If you have a stroke and become disabled, then you qualify for Social Security disability, and have a cash income and medical care for the rest of your disabled life. We're spending money in the wrong places.

**GEBBIE:** What should we look for from the private sector?

**KOPLAN:** We have a good example with the obesity epidemic that's before us. The forces necessary to deal with this include public health officials, clinicians, com-

## Cigarette smoking by population

United States, 1965–2003



SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION. NATIONAL CENTER FOR HEALTH STATISTICS. HEALTH, UNITED STATES, 2004

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munity groups, the school system, and business. It's a major public health issue that will cause a huge increase in health care costs for decades to come. The private sector can be an incredibly important partner — or it can play the role that tobacco companies have played for the last half-century and be obstructive.

**FOX:** Over the next several decades, we will need every able-bodied person to work who can work. We're an interdependent society, and people who become disabled not only require government resources, they are not part of the workforce. National foundations also need to do a better job of training mid-level public health practitioners in issues like finance and data gathering.

**GEBBIE:** How does personal behavior fit into public health, especially when business interests are involved in issues like smoking or firearms?

**FOX:** Kristine, if you smoke and could wheeze yourself into obscurity somewhere on a desert island, then maybe that would be fine. But that's not what happens. I end up paying part of your disability costs. That gets back to interdependence — the cost sharing and the choices we make as a society.

**KOPLAN:** Around 1915, the health officer of New York said to the City Council, you tell me what rate of TB you want to have in this city, and I'll tell you what budget we need. We have good documentation that this applies throughout the nation — when the investment in TB control is high, in the next 5 years the rate of TB declines, but when TB expenditures are cut, the rate goes up again. This is true for a wide range of health issues. One of the best examples is tobacco control. The states that have committed money, combined with creative, effective, hard-hitting campaigns, have dropped their rate of tobacco use. There are few areas of society where you can say if you invest X amount in public health, we can show you a considerable difference in lives saved.

**GEBBIE:** But once we've saved those lives, do we have to keep spending on public health? Doesn't the problem go away?

**KOPLAN:** No, the problem doesn't go away. Immunization is probably the best example. There is no other technical advance that has had as many benefits for the health of the people of the world as immunizations have had. Probably a third to half of us sitting here today would have died in childhood if it hadn't been for immunizations. Yet, immunization is under constant assault by special interest groups and in Congress by officials who think they can make some political gains by trying to roll it back. We forget about polio, pertussis and diphtheria, and measles and mumps — these killers and maimers — and we say, "We don't have to invest that much anymore; we can do without. Not everybody has to have it." It's a real fallacy in thinking.

**GEBBIE:** Could the public sector alone or the private sector alone have made the difference in current attitudes toward tobacco? What got us to where we are today regarding tobacco use?

**MARKS:** Today, just below 25 percent of adults smoke. The wide disparity at the time of the first Surgeon General's report has narrowed, but there still is a disparity. Men were much more likely to smoke in the 1960s than they are now. Most of the impact has come from the public sector, rather than from private industry, recognizing that private industry in this case was the tobacco industry. While we ought to recognize the value of well-done media efforts to discourage children



**"Public health** departments want to do prevention, but there is no funding available to assess the community and target efforts around the highest issues affecting morbidity and mortality."

— C. Earl Fox, MD, MPH

from smoking, the single most effective intervention has been the price of cigarettes, and cigarette taxation has been the driver. That's a public sector intervention.

**KOPLAN:** California's smoking rate has dropped below 18 percent this year, and the country as a whole is at about 24 percent. Utah has a lower rate, but Utah has a dominant religion that doesn't believe in tobacco use. California has a wide range of economic and other differences, yet it has been able to drop the rate much lower than the rest of the country. The reasons are investment, will power, and targeted ads. It's a good example of how you can have an impact on health by investing in it.



**"A statistic came out recently that General Motors and Ford each spend about \$6 billion a year in health care for retirees. That's a great incentive for big business to push population-based prevention activities."**

**— Jeffrey P. Koplan,  
MD, MPH**

## GLOBAL HEALTH ISSUES

**GEBBIE:** If we think globally, what is the greatest public health concern for the world? Is it AIDS, or are there other problems we should be attending to?

**KOPLAN:** Safe, potable water worldwide, if I had to pick one ongoing issue that is only likely to get worse. Tobacco use in countries like China is another. But the biggest issue globally that concerns both pharmaceuticals and public health is unequal distribution of resources. There is a discrepancy between the haves and have-nots with respect to health care delivery and standards of quality in health care. My concern is that we're going to have tremendous advances in health care in this country in terms of markedly improved pharmaceuticals and more effective approaches to disease care. It will come with some cost. We

may be able to pay for that care, one way or another, but other parts of the world won't. Some populations within our own country may not be able to, either. My worry is that we're going to see this increasing disparity in types and quality of care among some of our own populations and between the rest of the world and us — it will be very destabilizing.

**MARKS:** We've always thought of infectious diseases as not respecting boundaries, and I'm thinking of a person incubating Ebola virus coming here on a plane, and I'm concerned about the impact. Suppose a person going on a plane to Africa is a tobacco company executive who knows how to market effectively to children? Who is the deadlier passenger?

**GEBBIE:** I've been in parts of Africa where the locally available food crops were being replaced with industrial-strength tobacco farming because it was a cash crop, which required the importation of food, and that is disturbing.

## DO WE NEED A PUBLIC HEALTH SYSTEM?

**GEBBIE:** Some people have suggested that if we had universal coverage, we wouldn't need a public health system. Others suggest that public health should be part of a fully integrated system, maybe even with a single payer. How do you respond?

**FOX:** The answer is not universal coverage, although I support it. You have other issues that may be barriers to care, such as location and language. One reason we've seen nothing happen at the congressional level is that there is no consensus as to what shape universal coverage should take. There are states that have worked on it. Maryland has had a "health care for all" project for about five years,

and has made some progress. One of the dilemmas in this country is that we not only have 50 different health care systems, Medicaid, and the State Children's Health Insurance Program (CHIP), but we're moving toward 50 more disparate health systems at a time the population is becoming more mobile. We're going in the opposite direction as a country — away from a system with common eligibility and common benefits.

**KOPLAN:** Western European countries all have universal coverage. You can get superb care in France, Sweden, Holland, and any one of a number of countries. But they have underdeveloped public health systems. In the face of a SARS outbreak, you can have the best health care delivery system, but lots of people will die unnecessarily if you don't have a good public health system. You can give great health care to everybody, but the environment can go to seed, and you will have toxic ill effects if you don't have a public health system. Public health deals with the whole population. You need both a good health care delivery system and a good public health system; one does not preclude the other.

## THE ROLE OF PHARMACY

**GEBBIE:** What should be the role of pharmacists, and what does drug importation mean for the public's health?

**KOPLAN:** I've wanted to say this for ages. In the whole health care field, tobacco is seen as the absolute enemy. It remains troubling to me that we have combined the major site for the sale of tobacco — the drugstore — with our pharmaceuticals. Now, I've heard many explanations as to why this is so. But, I would like to see pharmacies separate those two things in some way. When I walk into a drugstore, it is selling both tobacco and drugs, and there's something very wrong with that.

**MARKS:** Drug importation is a short-term issue. Globalization of clinical care, including pharmaceuticals, is rapidly coming upon us. The pharmaceutical companies subsidize the research that the rest of the world uses, so there's going to be some equalization of prices eventually. But I want to put it in a different context. Suppose your health insurer says you pay 80 percent of your bypass surgery if you go locally, but we'll pay 100 percent, plus we'll send your spouse with you if you get it done in Cancun, and you can recover walking along the beach. Make no mistake, we have trained enough doctors. We already know that people are reading X-rays in other countries. All the major lab companies in this country have centralized operations. They could just ship an operation to Monterey, Mexico, and get it done a lot cheaper. We have to face that as a nation, and we're going to have to grapple with it in ways that we haven't even begun to think about.

**FOX:** Drug importation is not the answer. If you look at state Medicaid expenditures, outside of long-term care, pharmacy accounts for the largest group of expenditures. It's a travesty that we passed the Medicaid bill, but prohibited the bidding down of pharmaceutical costs.

## NEED FOR EDUCATION

**GEBBIE:** We have alluded to the fact that people just don't get it when we talk about more population-focused attention to public health. Would it make a difference if we required the teaching of public health in high schools or in colleges, or made a broader attempt to use social marketing to educate the whole country?

**KOPLAN:** Public health has become very popular in colleges where public health

courses have been instituted. Harvard currently has something like 600 undergrads enrolled in public health courses. They're oversubscribed, and they've had to add more. So I think there's a real hunger and thirst and passion for public health subjects among students who aren't premed, prepharmacy, or prenursing. Whether they go into business, or into law, or whatever else, their interest, appreciation, and sensitivity to public health will serve us all well.

**MARKS:** One reason public health is popular at the undergraduate level is that it's something young people can connect to. You don't have to be a scientist or a physician to help your community. It would do us well as a society to foster that kind of thinking. There's a general distrust of government that has served this country well throughout much of its time, but there's also a recognition that we often turn to government for solutions or help. Understanding government's role in achieving the things that are good for our society as a whole is something we have to recapture.

**FOX:** There's not much more in the way of prevention training in current medical education than there was in 1972 when I graduated from medical school. One of the things that we've been doing at Johns Hopkins is offering first-year medical students the opportunity to do HIV testing and counseling in the community. Forty percent of the incoming class of medical students volunteered on a long-term basis to do evening testing and counseling. We're now looking at whether we can teach these students office-based prevention, so that they can go into the community and do blood pressure screenings, vision screenings, and

counseling. We estimate that upward of 80 percent of the incoming class of medical students will want to do this. It's a great opportunity to teach them prevention, whether they're dermatologists or radiologists, or whatever. We're hoping that the project we have at Johns Hopkins can be a model for getting the majority of first-year medical students coming through any medical program to get engaged in prevention in the community in a way that will stay with them throughout their lives.

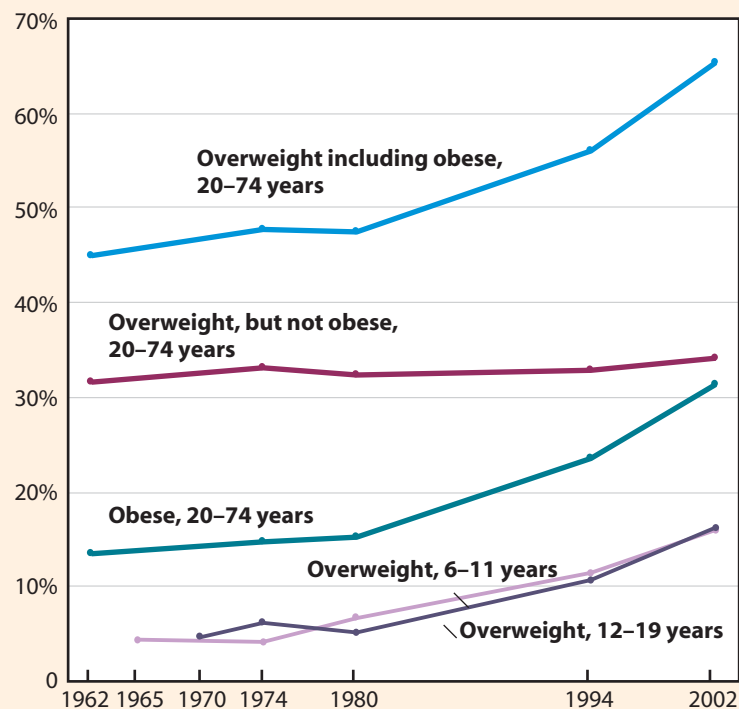
## PREVENTIVE CARE

**GEBBIE:** What will it take to focus on preventive care?

**FOX:** As public health officials, we really don't know how to reach out to business and industry. For example, in the early 1980s we were trying to get the issue of excessive infant mortality rates on the national radar screen. A finance officer who worked for Burlington In-

## Overweight and obesity, by age

United States, 1960–2002



SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION. NATIONAL CENTER FOR HEALTH STATISTICS. HEALTH, UNITED STATES, 2004  
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dustries in North Carolina realized the long-term consequences of infant mortality and morbidity, and went around the country talking about this issue. A Southern governors' task force on infant mortality was formed in the early 1980s that went to every state and got visibility for the issue. As a result, during the Reagan administration — a time nobody would have guessed there would be an expansion of Medicaid — there was a large expansion to provide mandatory coverage for low-income women. It happened in large part because business and industry got engaged. Most of us preach to the choir. We don't know how to contact business leaders. That's something the public health community needs to work on.

## SOCIAL EQUITY AND HEALTH OUTCOMES

**GEBBIE:** With respect to equity and social justice, what is the role of public health in narrowing or eliminating disparities in outcomes of health?

**KOPLAN:** We've done it for some public health issues. There's no disparity in immunization levels in this country. Now, other things may be structurally and technically different; nevertheless, we have demonstrated that it's possible to do it. It's unacceptable to have populations in this country at different levels of illness when they don't have to be. We need to make every effort we can to address it.

**FOX:** Most of the successes of my public health career have been a result, in large part, of collaborating with nongovernmental entities or people outside the formal structure of government. For example, when I was an Alabama, around 1988, we had the country's highest infant mortality rate, so we started a group that included professional groups, lay groups such as The League of Women Voters, and the Catholic charities. We generated such a hubbub that the governor formed a task force on infant mortality. The Medicaid agency went from a reimbursement of \$400 to \$1,600 per obstetrics case. Through the mobilization of a number of groups outside the public health system, we provided the information and a forum. We acted as a catalyst. That points to the ability of public health to act as a bully pulpit to help groups mobilize and get involved at the political level.

**GEBBIE:** Does the public health work force have problems with a lack of diversity?

**FOX:** Yes. The Bureau of Health Professions at HRSA sends \$100 to \$200 million a year across nursing, dentistry, public health, and allied health. It's a minuscule amount of money. The HRSA programs are targeted at putting professionals in underserved areas and broadening diversity, but we're not spending much money in that area. Across Republican and Democratic administrations, there has been a paucity of funding for those kinds of efforts. Only 1 in 5 Medicaid kids gets oral health care even if they have Medicaid coverage. We're not doing anything in training more dentists or oral hygienists. There's a huge issue in both the quality and quantity of the workforce. There's a huge amount of money thrown at graduate medical education, but very little in the way of prevention and toward a number of the professions like dentistry where we have huge deficits.

**GEBBIE:** Some people fear that politics is getting in the way of public health. How does public health balance politics and good science?

**FOX:** Over the last 32 years of my career, I've watched virtually every level of pub-



**"It's critical** for the public to understand what public health is and does, and how staying healthy provides the kind of life people want for themselves and their children. If we make those connections easier to see, then they'll support public health."

— James S. Marks,  
MD, MPH

lic health become more politicized. Whether it's federal officials or health officers at the state level, they are all appointed now by governors, mayors, or some political entity. I'd like to see if there is a way we could reverse the trend for the politicization of public officials. In Alabama, the state medical association would ask me, "What does the science say? If the science supports this, we will support you." I was there 6 years, and in every instance they held true to that question. In lieu of having a board insulated from the political process, an alternative would be to work more with community groups and help them coordinate their activities in the political process.

**MARKS:** What would we expect or hope to see 100 years from now? If the same trend were to hold — a 40-year increase in life expectancy — do you think we can handle Social Security and Medicare then with only a few hundred people dying of heart disease or cancer a year? What will it take to get there? We can afford those kinds of changes only if we have less cancer and heart disease rather than better and better treatments, especially intensive care. And if people find jobs and a life that is satisfying and enjoyable through their older ages.

**KOPLAN:** We have to move to a broader definition of health and what we associate with good health in the next 50 years. To some degree Europeans have done it, and many other societies less developed than ours. And that is how we value our time; how we view our work and its relationship to the rest of our lives, our family, and spirituality. The development of those values will lead to our being healthier and having a better quality of life. It's not just scientific advances and visits to doctors that will make the difference. It also will be the interplay of politics, as Earl said. We will continue to reap positive benefits, but some significant changes have to be made.

