

The nation's public health system is something that many Americans take for granted — until things go wrong. Following the attacks of September 11, 2001, and the anthrax mailings a month later, the workings and mechanisms of hundreds of public health agencies within federal, state, and local governments came under intense scrutiny by the media and Congress.

That examination identified a multitude of problems: outdated laboratories, poor coordination, and serious workforce shortages. Congress responded by sharply increasing funding for bioterrorism preparedness. A portion of that funding is being used to rebuild a long-neglected public health infrastructure.

Today's public health system is expected to have the capacity to analyze real-time data from emergency rooms, physician office visits, medication sales, and other scattered sources to detect aberrant patterns of disease outbreaks and other causes of illness and death.

WHAT DO PUBLIC HEALTH AGENCIES DO?

The mission and the range of activities of public health agencies is very broad. They are responsible for the prevention, treatment, and mitigation of serious diseases and disabling conditions. They must cope with the nation's fragmented health care delivery system and its tens of millions of underinsured and uninsured individuals.

They operate disease vaccine programs for diseases such as polio and mumps; clinics that provide services to migrant workers and others with no stable source of health coverage; and surveillance programs that track infectious diseases such as tuberculosis and HIV/AIDS and non-infectious diseases such as breast cancer. They conduct public education campaigns to minimize unhealthy behaviors, such as smoking, which can lead to illness and death. They enforce thousands of state and local regulations that address such key issues as water safety, restaurant inspections, tuberculosis testing, environmental health services, surveillance, and communicable disease control.¹

KEYFACTS

- In 1900, the average lifespan in the United States was 47 years. Today, the average lifespan has been lengthened by more than 30 years to 78. Advances in public health are responsible for 25 of those 30 extra years.^a
- More than 90 million Americans live with chronic illnesses, which account for 70 percent of all deaths and 75 percent of health care costs in the United States.^b
- The direct medical costs associated with smoking totaled more than \$75 billion per year during 1995 - 1999, and another estimated \$82 billion per year in lost productivity. For each adult smoker in 1999, these costs represented \$1,623 in excess medical expenditures and \$1,760 in lost productivity.^c
- Approximately \$300 billion was spent treating heart disease in 2001. Lost worker productivity caused by cardiac disease that year was estimated at \$129 billion.^d
- Americans have been getting steadily fatter. Surveys show that the percentage of children and teens classed as overweight has surged from 5 percent to nearly 16 percent over the last 30 years. Similarly, among adults, surveys have found that the rate of obesity — about 30 pounds or more overweight — is now 15 percent or higher in all states.^e
- Project Bioshield, a new 10-year, \$5.6 billion bioterrorism initiative, will fund research for next-generation medical antidotes, and for government purchase of vaccines and drugs for potential "bioweapons" like smallpox or anthrax.^f
- The AIDS Drug Assistance Program (ADAP) is the largest federal discretionary program for HIV/AIDS care. ADAP's budget totaled \$749 million in FY 2004 — more than 14 times the FY 1996 budget of \$52 million. Despite this, the need for HIV medications still surpasses available resources.^g

For key fact sources, see endnotes.

PUBLIC HEALTH ISSUES

The range of public health activities and research encompasses many important areas not described in this chapter. Below is a brief guide to additional topics, accompanied by links to relevant sources.

Maternal and child health: Includes Sudden Infant Death Syndrome, prenatal care, injury prevention, emergency services for children, newborn screening, family-based services, women's health, child health and safety, children with special health care needs, adolescents, genetics, training, research, and traumatic brain injury.

<http://www.mchb.hrsa.gov/mchirc>
<http://www.mchpolicy.org/>
http://www.usaid.gov/our_work/global_health/mch/

Chronic illnesses: Includes heart disease, cancer, alcohol and drug abuse, chronic lower respiratory diseases, stroke, information about prevention and health promotion, and older Americans' health.

<http://www.cdc.gov/nccdphp/overview.htm>
<http://www.chronicillnet.org>
<http://www.niaaa.nih.gov/>
<http://www.samhsa.gov>
<http://www.faceandvoicesofrecovery.org>

Public health infrastructure and workforce: Includes medical and public health personnel shortages, training, reporting, laboratory and other research facilities, clinics, and other treatment facilities.

<http://www.phf.org/infrastructure/>

Environmental health concerns: Includes water and air quality, effects of noise pollution, carcinogens, and hazardous waste.

<http://www.cdc.gov/node.do/id/0900f3ec8000e044>
<http://www.cdc.gov/nceh/>

Emerging and re-emerging infectious disease: Includes drug resistant tuberculosis, influenza, and hospital acquired infections, monkey pox, Ebola and other diseases.

<http://www.cdc.gov/ncidod/>
<http://www.cdc.gov/nchstp/od/nchstp.html>

Genomics and public health: Includes public health investigations, predictive testing, and screening of family histories.

<http://www.cdc.gov/genomics/population.htm>
<http://www.cag.icph.org/>
<http://www.genomicstoolkit.org/index.shtml>

In addition, public health officials run education and surveillance programs targeting chronic conditions of the aged, including arthritis and osteoporosis; reach out to young people who may be at risk for sexually transmitted diseases, violence and abuse; and help prepare health care practitioners to be "first responders" in ongoing battles against infectious diseases and bioterrorism.

In doing their work, local, state and federal public health officials work with other governments and international entities, such as the World Health Organization (WHO), to combat HIV/AIDS, Severe Acute Respiratory Syndrome (SARS), West Nile virus, and other infectious agents.

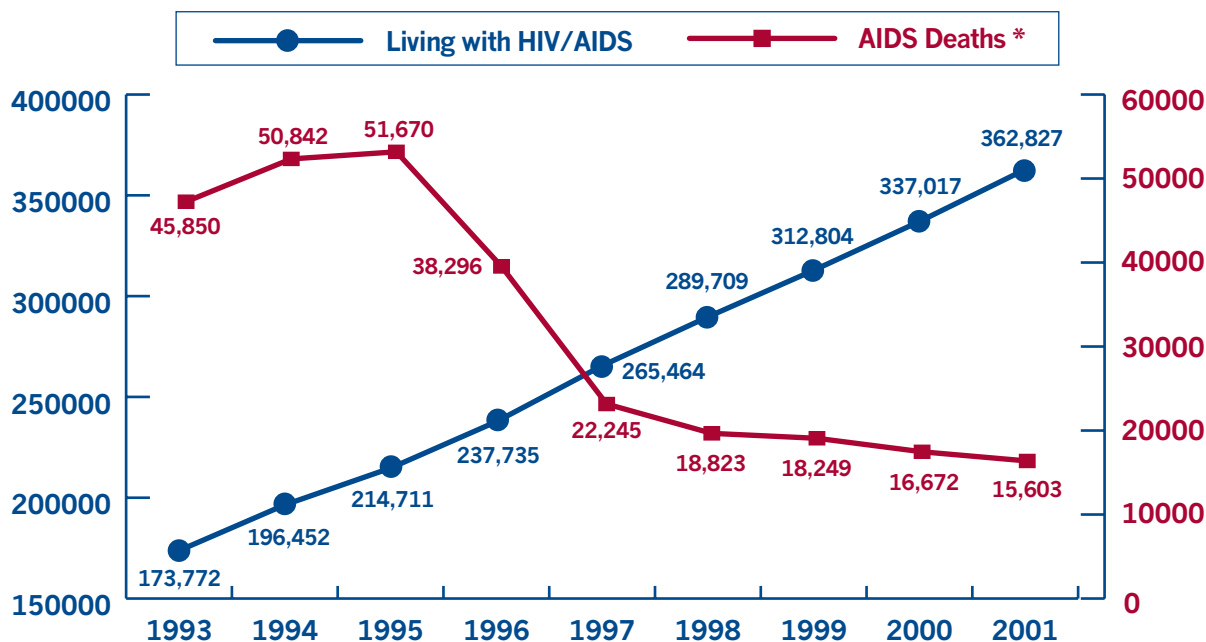
HOW ARE PUBLIC HEALTH AGENCIES ORGANIZED AND FUNDED?

Public health programs at the federal level operate with spending allotments that are set each year. This is different from the funding of entitlement programs such as Medicare, which are designed to be continuously funded at levels reflecting the number of beneficiaries enrolled and payments made to their medical providers.

Congress decides on an annual appropriation for the Public Health Service (PHS). Thus, public health funding is less secure and more likely to see year-to-year swings than funding for entitlement programs. This is of great concern to a wide range of advocates and stakeholders, who closely track the budgets of leading PHS agencies within the Department of Health and Human Services. These agencies include the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Health Resources and Services Administration (HRSA) and the Substance Abuse and Mental Health Services Administration (SAMSHA).

Local public health agencies — which are organized at the county, city or regional level — have their own funding sources. Across the nation, there are more than 3,000 local boards of health, 59 state and territorial health departments, and more than 160,000 public and private laboratories that perform public health-related work.² A survey based on 1999 data found that spending by local public health agencies varied from \$0 to \$836 million. Local agencies received close to half of their funding that year from local sources, and about one-

ESTIMATED U.S. DEATHS AMONG PERSONS WITH AIDS & ESTIMATED NUMBER OF PEOPLE LIVING WITH AIDS, 1993-2001



Note: The line representing AIDS Deaths correlates to the y-axis on the right
 *These numbers are point estimates of the number of persons living with AIDS derived by subtracting the estimated cumulative number of AIDS deaths minus the estimated number of persons diagnosed with AIDS.

Source: Centers of Disease Control (2001). "HIV/AIDS Surveillance Report." Vol. 13 No. 2. December. (<http://www.cdc.gov/hiv/stats/hasr1302.pdf>).

third from state sources, including some federal dollars. Much of the rest came from fees and reimbursement sources, including insurance programs. State and local governments contribute almost two-thirds of total public health expenditures, while the federal government helps pay for the remaining one-third.³

Public health agencies use such funds to support a wide variety of goals and activities. Public health encompasses a vast portfolio of areas (See box, "Public Health Issues"), that are constantly changing in scope and importance.

Among the more prominent issues facing public health agencies in the U.S. today are high blood pressure, elevated cholesterol levels and obesity, now ranked as a leading risk factor for major illness. HIV/AIDS, bioterrorism preparedness, lifestyle risk factors such as alcohol and drug abuse, chronic disease, severe acute

respiratory syndrome (SARS), and food safety are also areas of concern for public health agencies.

HIV/AIDS

Twenty years of intense research has led to more effective treatments for HIV/AIDS. Public policy discussions are increasingly focusing on how to expand and improve resources for the public health and public-sector insurance programs that can deliver treatments to the people who need them.

From 1981 through the end of 2002, about 900,000 cases of AIDS were diagnosed in the U.S.⁴ Millions more people are living with undiagnosed HIV. Each year, an estimated 40,000 new HIV infections occur in the U.S.⁵ Although estimated deaths from AIDS in the U.S. have plummeted each year since the mid-1990's, the number of newly diagnosed AIDS cases began to rise again recently. (See chart, "Estimated U.S. Deaths

Among Persons with AIDS & Estimated Number of People Living with AIDS, 1993-2001.")

Public dollars finance HIV/AIDS work in five broad categories — treatment and related support services, cash and housing assistance, research, prevention, and international programs.

Two of the three major treatment programs are Medicaid and the Ryan White CARE Act, both jointly financed by the federal government and the states. In FY 2004, the federal share of Medicaid spending for HIV/AIDS care was estimated at \$5.4 billion, the state share at \$4.3 billion.⁶ The Ryan White CARE Act funds primary health care and support services for persons living with HIV disease. The most recent data available for Ryan White funding is from FY 2003, when Congress appropriated \$693 million for the Act's AIDS Drug Assistance Program (ADAP), while states allocated \$165 million.⁷ The ADAP program provides medications to low-income people who are either uninsured or underinsured. The third major source of federal funding for HIV treatment is Medicare, which registered expenditures of \$2.6 billion in FY 2004.⁸ Treatment currently accounts for nearly 60 percent of the total federal HIV/AIDS spending of \$18.5 billion.⁹

Because of ADAP, the Ryan White CARE Act is the largest discretionary program for HIV/AIDS care. During the last decade, ADAP's budget has grown from \$52 million in FY 1996, to \$749 million in FY 2004, a more than 14-fold increase.¹⁰ Nonetheless, the need for HIV medications far surpasses the resources available. In response, states have closed enrollment in ADAP and taken other restrictive steps.

Worldwide, it is estimated that between 35 million and 40 million people have HIV/AIDS. Only about half of them receive regular treatment.¹¹ Funding by the U.S. government on HIV/AIDS programs outside the U.S. has been growing rapidly, reaching 10 percent of total federal HIV/AIDS funding in FY 2004.¹² The U.S. has become a significant contributor to the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) — an independent foundation dedicated to disbursing resources to developing countries for combating infectious disease.

The Global AIDS Initiative (GAI) is an even larger program. GAI is the principal component of the Bush

Administration's Emergency Plan for AIDS Relief that was announced in January 2003. The five-year plan for the GAI initiative has a target budget of \$15 billion and focuses on African and Caribbean countries with high rates of HIV/AIDS.

The administration's combined FY 2005 budget request for the GAI initiative and the Global Fund is \$2.6 billion, based on an estimate that 60 percent of the Global Fund's U.S. allotment will be dedicated to AIDS spending.¹³ The administration's FY 2005 request for the Global Fund is \$200 million. Congress in FY 2004 appropriated \$547 million for the fund.

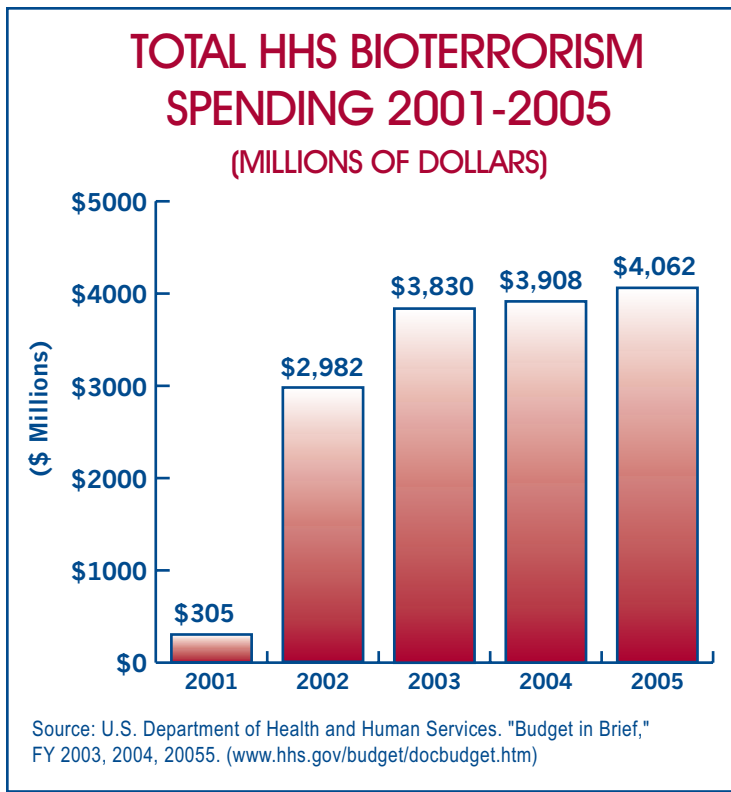
In the area of HIV prevention, the 2004 congressional and presidential election campaigns are focusing some attention on programs that focus principally on sexual abstinence, vs. those that provide information and education services that also include contraception. The different approaches — with abstinence-only programs championed by some public officials and social conservatives, and more comprehensive programs backed by many public health experts — are also producing conflict and controversy within school systems. For example, in North Carolina, three chapters on HIV/AIDS, contraception and marriage and partnering were removed from ninth-grade textbooks after officials decided that the material did not comport with state law on abstinence-only education.¹⁴

The Bush administration has called for increasing funding for abstinence-only education by \$273 million for fiscal year 2005. Since 1996, when the welfare reform law began offering states matching funds for abstinence-only programs, federal spending on these and similar initiatives has grown to about half a billion dollars.¹⁵

BIOTERRORISM PREPAREDNESS

The ability of the U.S. public health system to respond to unexpected threats from substances used in bioterrorist attacks was tested — and found wanting — by events of October 2001. Anthrax-laced mail was sent through the U.S. Postal Service to the Washington, D.C. offices of Senators Thomas Daschle and Patrick Leahy, and to media outlets in Florida and New York. Five people died.¹⁶

The nation's infrastructure of federal, state, and local



health departments quickly discovered that they were not prepared to coordinate a timely response. They lacked sufficient laboratories, response centers for diagnosis, testing and treatment of agents, and had too few skilled public health professionals.

The resulting outcry spurred Congress to appropriate large amounts of new funding for bioterrorism and public health infrastructure expansion initiatives. Department of Health and Human Services (HHS) funding has grown by more than 12 times from an FY 2001 level of \$305 million to \$4.1 billion in the Administration's FY 2005 budget request.¹⁷ (See chart, "Total HHS Bioterrorism Spending 2001-2005.")

At the same time that Washington increased spending for public health, states cut back. Congress mandated that the new bioterrorism preparedness funds supplement, rather than supplant, state public health budgets for this purpose. Wishing to trim their public health spending in FY 2003, but unable to touch their bioterrorism budgets, about two-thirds of states cut funding to non-bioterrorism public health programs, such as cancer prevention and even closely related emerging infectious diseases programs, in FY 2003.¹⁸

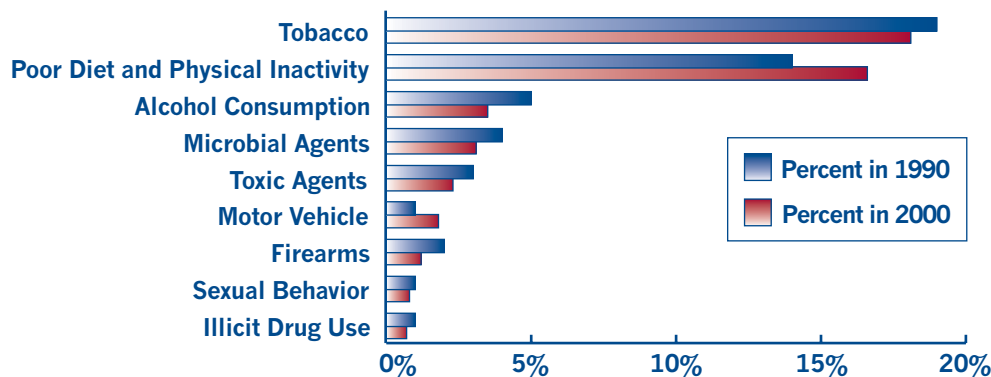
The general lack of preparedness suggests that sustained investment in core functions, rather than short-term funding that addresses one disease at a time, will be required to rebuild and sustain needed nationwide public health capacity. Federal bioterrorism funding alone cannot replace adequate state support for public health. More studies are needed to identify remaining gaps in the public health infrastructure to help the country prioritize funding needs.

Preparedness falls short on a number of levels. For example, though at least 43 states now have at least one Biosafety Level 3 laboratory, capable of handling high-risk biological agents, many state and some CDC experts feel that more are needed.¹⁹ A 2003 survey indicated that states collectively obligated about 30 percent of their first-year funding to purchasing laboratory equipment and supplies.²⁰ However, many of the lower-level laboratories on the front lines still require significant equipment and security upgrades.²¹ Another problem is the general shortage of skilled personnel with appropriate training.²² Many states have reported serious difficulties in recruiting new staff.^{23,24}

Finally, no national standards for bioterrorist preparedness exist. The initial standards set by HHS focused mostly on assessing needs and setting targets for further planning — rather than on meeting specific targets for readiness.²⁵ Many plans, especially for hospital preparedness, have never been tested in drills or exercises.²⁶ CDC recently proposed to develop scenarios to help jurisdictions test their bioterrorism preparations. These scenarios are scheduled for release in late 2004.²⁷

One high-profile initiative that has received attention is the Strategic National Stockpile. Managed in conjunction with the Department of Homeland Security (DHS), the stockpile is a national repository of antibiotics, chemical antidotes, antitoxins, life-support medications, IV administration, airway maintenance supplies, and medical/surgical items.²⁸ In the event of an emergency, supplies would be sent to selected dispensing sites and treatment centers, with delivery of initial supplies within 12 hours.²⁹

LEADING BEHAVIORAL AND LIFESTYLE FACTORS THAT CONTRIBUTE TO DEATHS, 1990 AND 2000



NOTE: Deaths due to the behavioral and lifestyle factors do not sum to 100%, but rather account for approximately half of all deaths in each respective year. Tobacco use, for example, is the leading factor contributing to death, accounting for 19% and 18% of all deaths during 1990 and 2000, respectively.

Sources: McGinnis and Foege (1993). "Actual Causes of Death in the United States." *JAMA* 270:2207-2212; Mokdad, Ali H., et. al. (2004). "Actual Causes of Death in the United States, 2000." *JAMA* 291:1238-1245. The percentages are for all deaths.

A related program, Project Bioshield, is funding research on next-generation medical antidotes, and financing government purchase of vaccines and drugs for smallpox, anthrax, Ebola, and other possible threats. The president signed a 10-year, \$5.6 billion extension of the program in July 2004.³⁰

A third initiative, BioSense, is jointly managed by CDC and FDA. The program's goal is to develop new systems for automated analysis of electronically available health data that can spot clusters of unusual health problems early. The Bush Administration proposed funding BioSense at \$130 million in its fiscal 2005 budget. Finally, for FY 2005 the Bush Administration proposed a "cities readiness" initiative, that would distribute medications and supplies during an emergency, for 21 large U.S. cities.³¹ Over the next several years, state and local public health departments will be looking for assurances that federal support for bioterrorism preparedness remains consistent, even if the perceived threat of attack by the public begins to decline.

LIFESTYLE RISK FACTORS AND CHRONIC DISEASE

While the health of Americans improved dramatically in the 20th century, a variety of lifestyle risk factors and

chronic diseases is eroding those gains.

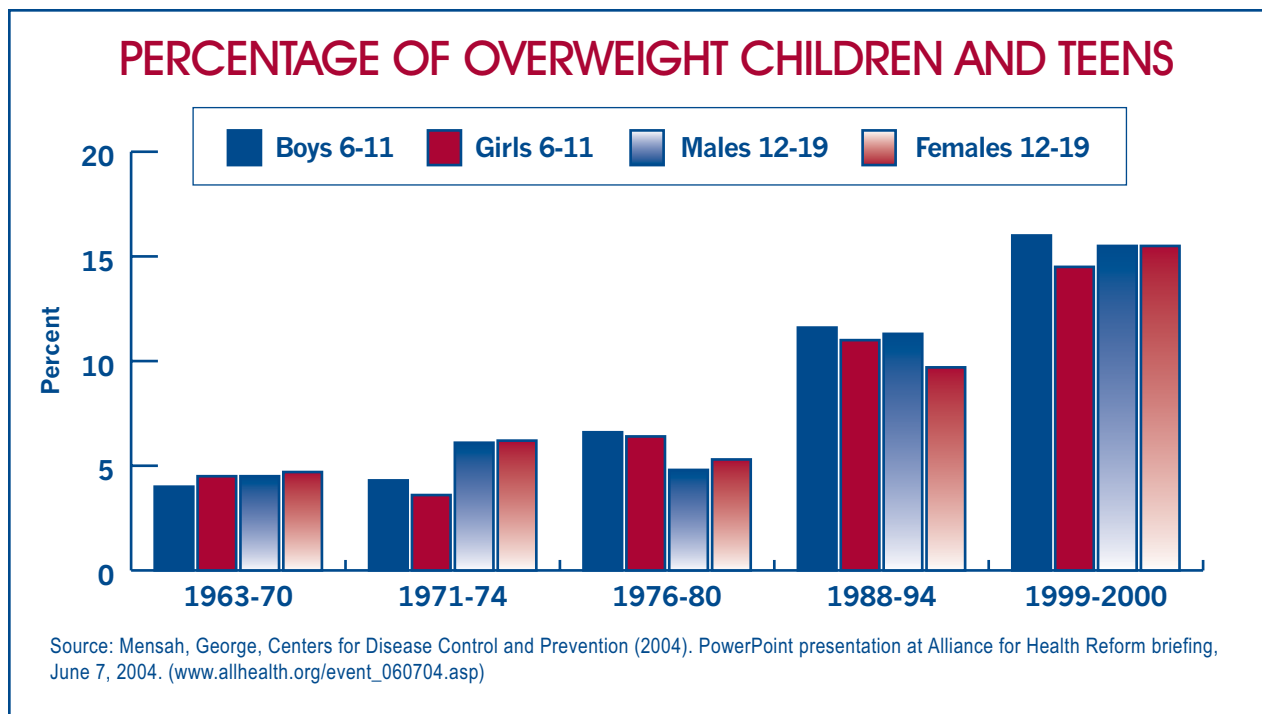
Heart disease — Statistics reported to CDC each quarter show that the number one killer remains heart disease, accounting for 950,000 deaths annually and afflicting nearly one-quarter of all Americans, who suffer varying levels of disability.³² (See chart, "Leading Behavioral and Lifestyle Factors that Contribute to Deaths, 1990 and 2000.") While government surveys report significant progress has been made in reducing death rates from heart disease during the last

three decades — half of all people who have a heart attack will now survive it — many survivors suffer from chronic problems, such as a weakened heart and shortness of breath.³³

A major reason that heart disease continues to be a leading public health problem is that it has many interrelated behavioral risk factors, including smoking, obesity, and lack of physical activity. Although smoking rates have dropped by 42 percent since the mid-1960's,³⁴ deaths caused by tobacco still far exceed deaths due to alcohol, motor vehicle crashes, and illicit drug use.³⁵

Tobacco — The public health community has long understood that funding smoking prevention and cessation programs is key to reducing deaths from tobacco-related illnesses, such as heart disease and stroke. A primary goal of the state attorneys general who negotiated the massive 1998 tobacco legal settlement — in which 46 states joined the four states that had already negotiated agreements — was to provide years of generous funding for anti-smoking and related public health efforts.

The multi-state agreement required tobacco manufacturers to make annual payments to states in perpetuity, totaling \$246 billion over the first 25 years.



In exchange, the companies were granted immunity from all future state lawsuits related to claims for tobacco-related illnesses.³⁶

Yet despite the promises of the attorneys general that much of the money would be used for public health purposes, the settlement did not require it. In the wake of revenue shortfalls in the first few years of the 21st century — and over the protests of the public health community — some states chose to use all, or a portion, of their tobacco settlement money to close budget gaps.³⁷ Moreover, some analysts have noted that state spending on public health declined between FY 2002 and FY 2003, and they have urged the CDC to begin formally tracking state and local expenditures on critical functions, particularly in areas that involve federal support.³⁸

Obesity — Apart from smoking, weighing too much is another well-recognized risk factor for heart disease. Excess body weight is also linked to high blood pressure, and is a risk factor for stroke, diabetes, arthritis, and some forms of cancer. During the last three decades, Americans have been getting steadily fatter. Surveys show that the percentage of overweight children and teens has surged from 5 percent to nearly 16 percent. (See chart, "Percentage of Overweight Children and Teens.") Similarly, among adults, state

surveys from 1985-2001 have found that the rate of obesity — defined as being 30 pounds or more overweight — is now 15 percent or higher in all states.³⁹

Obesity's toll is evident in the rising rates of diabetes. Among people ages 20 to 39, the incidence rate of diabetes has jumped by 70 to 80 percent since 1990.⁴⁰ In March 2003, these and other statistics prompted HHS to develop the Healthy Lifestyles and Prevention initiative, which features an outreach campaign on the Internet, public service announcements,⁴¹ and an expanded research agenda at the National Institutes of Health.⁴²

SEVERE ACUTE RESPIRATORY SYNDROME (SARS) AND WEST NILE

CDC's response capabilities for handling outbreaks of newly discovered infectious diseases was tested in 2003, when the first reports surfaced from Asia of a new and deadly viral illness known as Severe Acute Respiratory Syndrome (SARS). Working closely with WHO, CDC worked to stem an outbreak here by deploying medical officers and specialists to help in on-site investigations of the outbreak around the world. CDC also initiated a well-publicized system of health alert notices to travelers who may have been exposed and lent extensive assistance to state and local health

departments throughout the U.S. for investigating possible cases of the disease.

As of December 2003, the number of Americans who contracted SARS (confirmed by laboratory evidence) totaled just eight, all of whom had traveled to other parts of the world affected by the disease that year. Worldwide, 8,098 people were diagnosed with SARS in 2003 — 774 of them died.⁴³

One of the legacies of SARS is a newly invigorated Global Disease Detection Initiative, with proposed new funding of \$27 million in FY 2005. If the funding is approved, CDC would use it to expand existing programs in five countries (Kenya, China, Brazil, Kazakhstan, and Thailand) and to set up new programs in five additional African countries and Guatemala. The initiative focuses on early warning systems, research on new viral strains, and coordinated response efforts with multinational organizations.⁴⁴

Domestically, the outbreak of West Nile virus continues to test the capabilities of the public health infrastructure. Commonly found in Africa, West Asia, and the Middle East, West Nile virus infects humans, birds, mosquitoes, horses and other mammals. In 2003, CDC reported 9,862 human infections in the U.S., 264 resulting in death.⁴⁵ Efforts to reduce the threat include planned blood and semen donation testing for the virus⁴⁶ and information campaigns urging the public to properly dispose of open tires and other reservoirs of stagnant water. Legislation to create new state grant programs for mosquito control was enacted in 2003, but as of July 2004, funding had not yet been appropriated.⁴⁷

FOOD SAFETY

Sharing responsibility for regulating the safety of the food supply, FDA and the U.S. Department of Agriculture (USDA) have sounded warnings about several public health issues during the last several years. One such warning focused on the beef supply, which is susceptible to contamination with infectious particles found in cattle with bovine spongiform encephalopathy (BSE). In humans, epidemiologists have linked consumption of BSE-contaminated beef products to a lethal brain disorder known as variant Creutzfeldt-Jakob disease, commonly known as "mad cow disease." Clinical symptoms may take years to appear.

Although BSE was first identified in 1986 in the United Kingdom, where it caused a large outbreak among cattle, no cases in the U.S. were identified until December 2003, when a single infected animal was identified in Washington State. In response, USDA issued a series of meat recalls in the western U.S., and later banned the use of all "downer" (nonambulatory) cattle for human food use.

In the arena of dietary supplement oversight, the FDA took action in April 2004 to ban products containing ephedrine alkaloids, also known as ephedra and Ma huang. Under the 1994 amendments to the Food, Drug and Cosmetic Act, dietary supplements are classified as foods and not drugs. Therefore, these products do not undergo clinical trials for safety and efficacy before being marketed. Dietary supplements are not required to carry the same type of labeling information on possible side effects and contraindications that pharmaceutical products must carry. Additionally, supplement manufacturers are not mandated to report adverse event complaints from consumers to the FDA.⁴⁸

Earlier efforts by the FDA to regulate the amount of ephedra in supplement products were withdrawn in the late 1990s. But after several additional years of analyzing scientific data on the documented side effects of various products containing ephedra, the agency concluded that it had the statutory authority to ban supplements containing ephedra on the basis of evidence pointing to a significantly increased risk of heart attacks, strokes and death.⁴⁹

In other regulatory actions taken over a six-month period from late 2003 to April 2004, the FDA sent 119 warning letters to dietary supplement distributors, refused entry to 1,171 foreign shipments of supplements, and seized \$18 million of mislabeled or adulterated products.⁵⁰ These actions are contributing to arguments by advocates and scientists that the FDA needs additional resources⁵¹ and a tougher regulatory approach in order to adequately monitor the safety of products in the fast-growing \$18 billion dietary supplement market.⁵²

Members of Congress who were instrumental in passage of the 1994 Dietary Supplement Health and Education Act (DSHEA) are now beginning to heed FDA's repeated calls for new resources. Legislation sponsored by Senator Tom Harkin and Senator Orrin

Hatch in July 2003 proposes five-year FDA funding of \$215 million for this purpose. As of mid-2004, no comparable measure had been introduced in the House of Representatives.

THE FUTURE OF PUBLIC HEALTH

The U.S. public health system faces many challenges. To help the country address those challenges and meet them, the Institute of Medicine published a report in 2002 called "The Future of the Public's Health in the 21st Century."⁵³ The report focuses on:

- improving health by looking at a variety of factors in an integrated way
- strengthening the public health infrastructure
- building partnerships
- bolstering accountability
- improving communication.

The report notes that despite leading the world in health expenditures, the United States is not fully meeting its potential to keep its citizens healthy and lags behind many of its peers. One problem is that the vast majority of health spending, as much as 95 percent by some estimates, is directed toward medical care and biomedical research. Yet there is strong evidence that behavior and environment are responsible for over 70 percent of avoidable mortality, and health care is just one of several determinants of health. Among the IOM's recommendations:

- The Secretary of Health and Human Services (HHS) should appoint a national commission to develop a framework for state public health law reform.
- Federal, state, and local government public health agencies should develop strategies to ensure that public health workers are highly trained.
- Congress should appropriate funds to test whether health workers are prepared and additional funds should be allocated for training.
- Federal, state, and local government public health agencies should develop key criteria in the areas of training and support for public health workers.

As the population grew and prospered during the 19th and 20th centuries, clean water, public sewage systems,

CANDIDATES' VIEWS

Two public health issues have been the subject of some attention in the 2004 presidential campaign: HIV/AIDS initiatives and efforts to combat bioterrorism.

President Bush's HIV/AIDS prevention initiatives focus on encouraging health care providers to test for HIV routinely. He has proposed doubling federal funding for programs focusing mainly on abstinence.⁵⁴ The president also backs federal funding for faith-based groups that work to prevent HIV/AIDS.⁵⁵ Senator Kerry's proposals highlight prevention programs administered by family planning organizations that offer guidance on HIV prevention using birth control methods, notably condoms, as well as abstinence.⁵⁶ Senator Kerry opposes efforts to limit funding to abstinence-only programs.⁵⁷

In the area of biodefense, Senator Kerry stresses the importance of building alliances abroad to prevent attacks, and creating a national strategy and bioterrorism "czar" to coordinate efforts across multiple agencies.^{58,59} President Bush's plan focuses on strengthening domestic defenses through a range of initiatives aimed at preventing and countering biological attacks, including the development, purchase, and stockpiling of vaccines.⁶⁰ Senator Kerry argues that the Bush plan gives too little attention to the importance of coordinated efforts with international groups, while President Bush contends that his administration has already initiated many of the bioterrorism policies Senator Kerry embraces.⁶¹

Senator Kerry links biodefense with the need for an improved medical response infrastructure, suggesting that public health facilities may need more resources to incorporate biodefense into their missions at a time when many are struggling to cope with the daily demands of underinsured and uninsured people in their communities.⁶²

and immunizations were critical public health issues. As can be seen from some of the issues presented above, those areas of importance have changed considerably. Bioterrorism and SARS, for example, were hardly on the horizon even a few years ago. What will worry public health officials and policymakers in a few years may be just as inconceivable today. What is certain is that the public health infrastructure needs fundamental improvement in order to cope with the uncertainties of the future.

STORY IDEAS

- How has your state spent its tobacco settlement money? Has spending focused on anti-smoking initiatives and related public health programs? How are state legislators planning to spend tobacco settlement funds in the future? How do public health officials believe the tobacco funds should be spent? Has the incidence of smoking among youths dropped since the agreement was signed?
- How has bioterrorism funding in your state for local preparedness changed recently? If it has decreased, what do public officials believe is the reason? How much added value do public health officials think the color-coded alert system administered by the Department of Homeland Security gives, relative to other public safety counter-terrorism measures?
- What is the perceived threat among residents in your area of future bioterrorist attacks? If the threat is perceived to be high, are there steps that people are taking to try to reduce their risk? How well do residents understand the bioterrorism preparedness programs and initiatives that have been funded? If the threat in your area is perceived to be low, how is this affecting, if at all, local bioterrorism preparedness efforts by public health officials?
- What is the story behind AIDS Drug Assistance Program (ADAP) funding in your state? How many individuals with HIV/AIDS receive their medications through the program? If there is a waiting list, how many people have applied for ADAP assistance, and how long is the wait? What is the health prognosis for individuals who are wait-listed? What recommendations do AIDS advocates have for the ADAP program?
- What is the toll from chronic diseases in your state? How has this changed in the last 20 to 30 years? What are the leading behavioral risk factors for adolescents as compared to adults? How has this changed? What state-specific activities and strategies are in place to reduce the incidence of chronic diseases?
- What do public health officials in your state believe are the possible hazards associated with dietary supplements? What steps, if any, are being taken to reduce those hazards?

SOURCES AND WEBSITES

Analysts/Advocates

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