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Trends Alert

Costs of Chronic Diseases: What Are States Facing?

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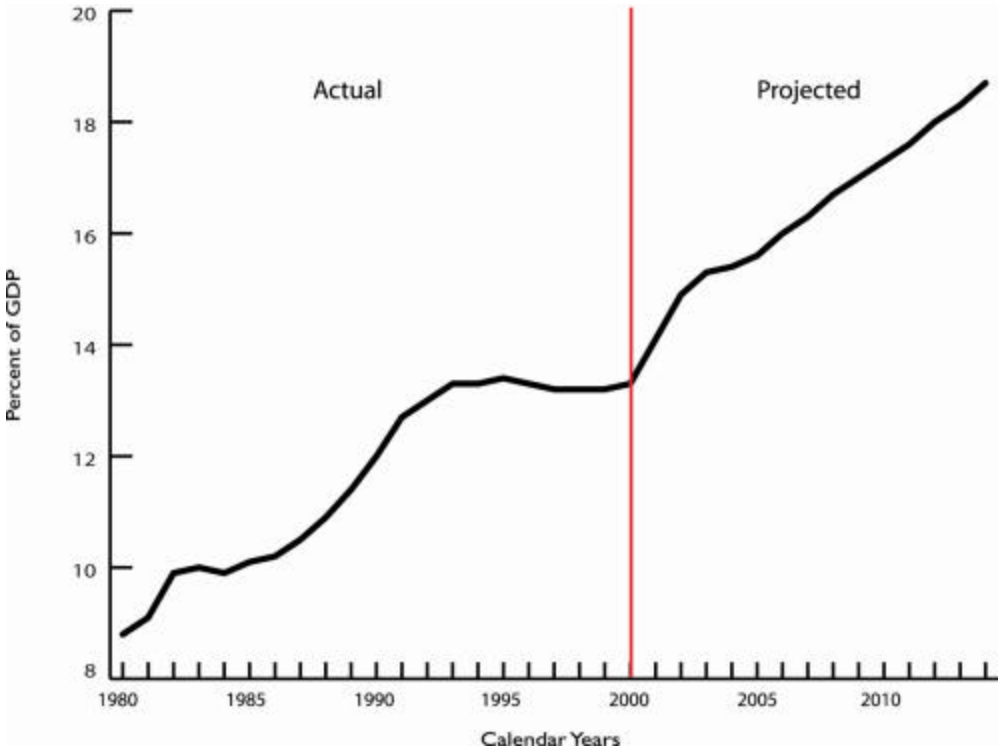
Introduction

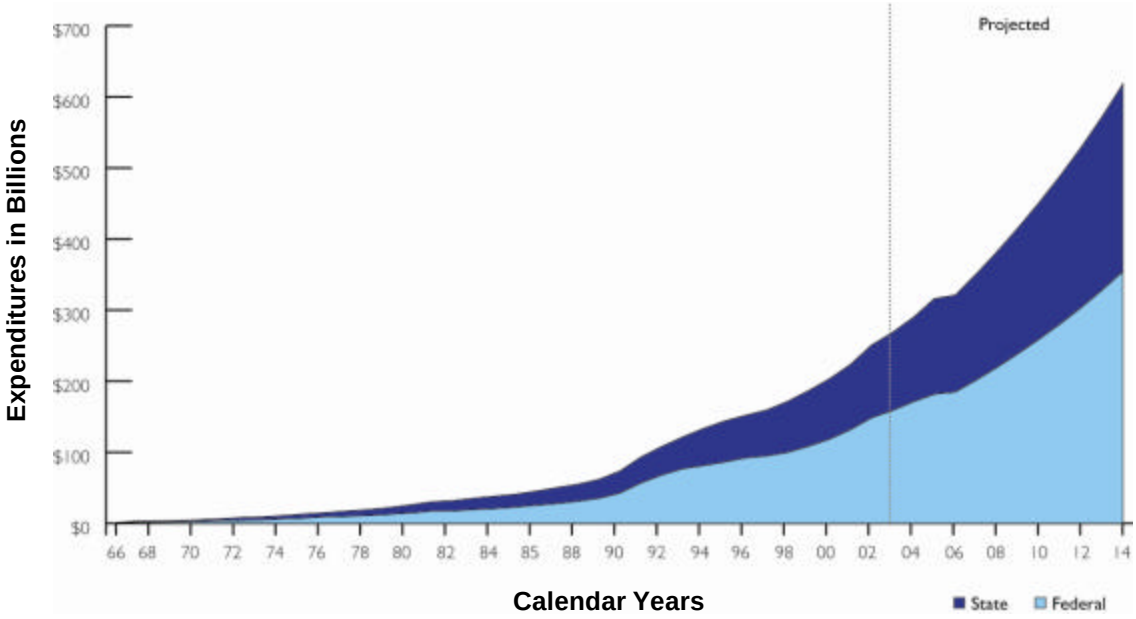
Health care expenditures in the United States have grown at slightly more than twice the pace of the national gross domestic product (GDP) in recent years, as shown in Figure 1.[1] Between 1980 and 2010, the portion of the nation's GDP spent on health is projected to roughly double. Simultaneously, public funds are paying for a larger share of these costs through Medicaid, Medicare and other publicly funded programs. This means that every year, health care costs will consume more and more public funds, leaving less funding for other needed programs. [2] If current trends continue, as shown in Figure 2, states will be responsible for approximately $250 billion to support Medicaid in 2014—twice the amount states currently contribute.

Figure 1. National Health Expenditures as a Share of Gross Domestic Product (GDP)



Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, June 2002

Figure 2. Federal, State and Total Medicaid Spending, 1965-2014



Source: Centers for Medicare and Medicaid Services, National Health Expenditures (NHE) Amounts by Type of Expenditure and Source of Funds: Calendar Years 1965 -2015, available at: www.cms.hhs.gov/statistics/nhe/#projects

Until recently, state policymakers have tried to control rising health care costs primarily through cost-containment measures. Now, however, states are paying more attention to the root causes of skyrocketing medical expenditures. These causes include increasing rates of some chronic diseases and conditions, the increasing use of more expensive pharmaceuticals, more long-term care and increased costs associated with emerging medical technologies.

Costly, debilitating and preventable chronic diseases are among the key contributors to the increased costs states face. And states are realizing it is important to focus on strategies that reduce the prevalence and costs of preventable diseases.

Chronic conditions such as cardiovascular diseases, cancer, diabetes, arthritis and respiratory diseases are major killers in the U.S. and a major source of illness, hospitalization, health care costs and long-term disability. [3] Without aggressive intervention into the root causes of these chronic diseases and their costs, these trends are expected to continue to worsen.

Policymakers at all levels of government are facing tough choices among funding priorities in light of these trends. However, the nation does not have to experience this gloomy future. The chronic diseases causing these cost increases are preventable. Those people who have developed a chronic condition can manage their disease. Chronic disease prevention and wellness promotion have been shown to reduce costs successfully. Many policymakers are already implementing policies and programs to promote physical activity, good nutrition, tobacco avoidance and cessation, and health screenings. In this Trends Alert, you will find information about health costs and chronic disease rates, available data on Medicaid costs for these diseases and descriptions of some of the most recent state policies and programs to prevent diseases and promote good health among Americans.

Trends in Health Care Costs

Chronic diseases are costing the U.S. many lives and dollars. Federal and state health care budgets are being squeezed, and families, too, are feeling the burden of higher out-of-pocket costs.

Overall Spending

In 2003, the latest year for which data are available, total national spending on health care rose to $1.67 trillion, or $5,670 per person. [4] This represents a 7.7 percent increase over the previous year. Significant cost drivers include pharmaceutical costs, particularly for the public sector. Between 1965 and 2000, the proportion of pharmaceutical costs paid by the public sector grew from 4 percent to 22 percent. [5] Additionally, between 1990 and 2000, personal health care expenditures increased for home health, prescription drugs and other costs, while hospital costs decreased slightly. [6]

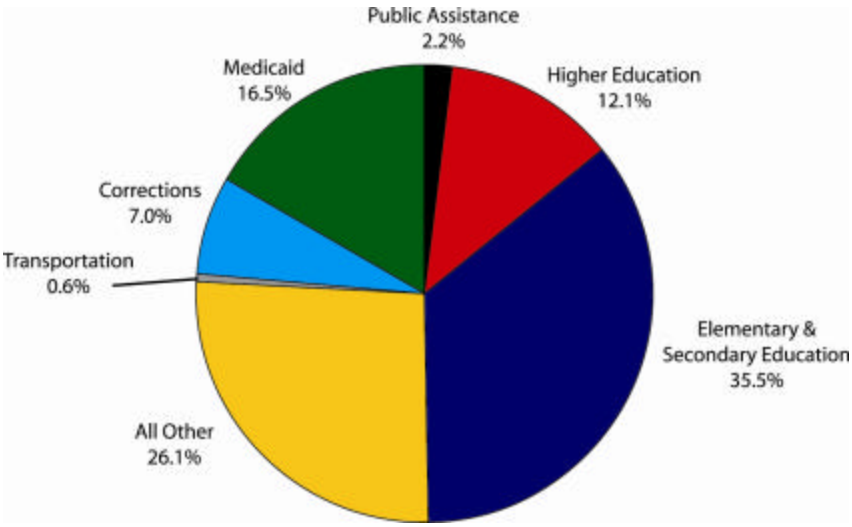
Experts estimate that chronic diseases are responsible for 83 percent of all health care spending. [7] In addition,

- 96 percent of Medicare spending and about 83 percent of Medicaid spending is for people with chronic conditions; [8]
- Health care spending for a person with one chronic condition on average is two and a half times greater than spending for someone without any chronic conditions; [9] and
- The average annual health care coverage cost for people with a chronic condition is $6,032, five times higher than for people without such a condition.[10,11]

State Spending

Expenses for health care and Medicaid are consuming more of state general funds, which parallels the national trend. According to 2003 data, Medicaid accounted for approximately 22 percent of all state spending while spending on all of health care constituted approximately 32 percent of state spending (including all state revenue sources). [12] Figure 3 shows that Medicaid consumed 16.5 percent of state general fund expenditures in 2003. Medicaid growth is outpacing state general fund growth. Between fiscal years 2004 and 2005, state general funds grew at a steady rate of 2.8 percent, while state Medicaid spending growth more than doubled (from 4.8 percent to 11.7 percent). [13]

Figure 3. State Medicaid Spending as a Percent of General Fund Expenditures, 2003



Source: National Association of State Budget Officers, State Expenditure Report, 2003

Household Spending

In 2002, the average household spent $2,350, or 4.8 percent of its income, on health care. This is a 20 percent increase from the average household spending of $1,959 in 1999. As health care coverage costs increase, even those with access to health insurance may not be able to afford private coverage and out-of-pocket costs.

- In 2003, roughly 43 million people reported having financial problems paying medical bills. [15]
- A 2003 survey found 63 percent of families that reported problems paying medical bills also had problems paying for other household necessities, such as food, clothing and rent. [16]
- The percentage of insured low-income individuals with chronic conditions who spent more than 5 percent of their income on health care increased from 28 percent in 2001 to 42 percent in 2003. [17]
- As many as 54.5 percent of people who file for bankruptcy cite medical expenses as a reason for filing. There has been an estimated 30-fold increase in medical expense-related bankruptcies since 1981. [18]
- The number of uninsured Americans increased by 6 million from 2000 to 2004. Employer-sponsored health insurance decreased from 66 percent of non-elderly in 2000 to 61 percent in 2004. [19]

Social and Health Factors Affecting Costs

In addition to increased use of health services and prices, other factors contribute to soaring health care costs. The aging of the population, greater longevity of life and medical advances mean that Americans are living longer with chronic illnesses. [20] Additionally, people at younger ages are being diagnosed with lifelong, disabling conditions. Finally, minority groups continue to experience disparities in health care access, coverage and care. The impact of chronic

diseases will continue to grow every year as more baby boomers age and develop chronic diseases.

Growth in Prescription Drug Use

Prescription drugs play a much more prominent role in health care today than ever before. New medications have been effective in improving health outcomes and quality of life and speeding recovery for patients. For those with or at risk for chronic diseases, pharmaceuticals have been used to reduce the need for bypass surgery, help prevent brain damage in stroke victims, lower cholesterol levels and provide relief for chronic pain. Prescription drug spending growth was 11.9 percent in 2004 and is projected to continue at a constant yet slightly slower rate of 8.7 percent through 2014. [21]

The increased use of prescription drugs also has a downside. The newest drugs are often the most expensive, and millions of Americans do not have adequate insurance coverage for medications. As a result, many chronically ill patients with conditions for which drug treatments are especially effective, such as osteoporosis, hypertension, diabetes and depression, may not have access to the medications

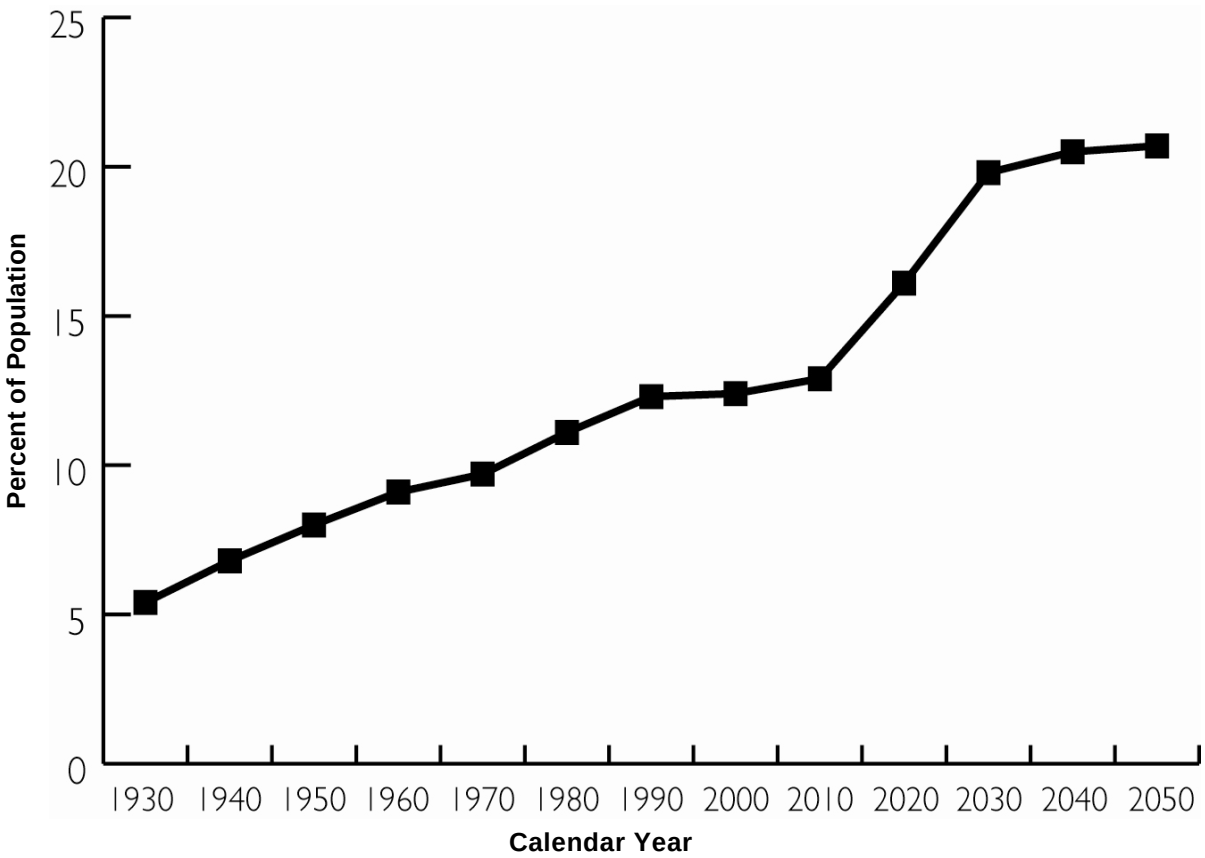
Medical Advances Increase Longevity for an Aging Population

The dramatic increase in life expectancy over the past 50 years is due in part to the medical advances that have enabled diseases that once led quickly to death to be controlled. [22,23] Modern medical approaches prolong life, but there are few outright cures for chronic diseases. Therefore, preventing diseases among those who are well and managing diseases among those who have them is critical to controlling costs.

While most people find the prospect of living longer to be great news, society must be prepared for the cost that accompanies these added years of life. By 2030, approximately 20 percent of the population will be over 65, as shown in Figure 4, a significant jump from the current level of 13 percent. [24] This population shift will have an enormous effect on health care costs because:

- Real per capita spending for health care could increase by 24 percent over current levels by 2030 due to the aging population alone. [25]
- Health care expenditures for a 65-year-old are now four times those of a 40-year-old. Paired with the aging of the baby boomers, between 2010 and 2030 the U.S. will experience a doubling of the population whose costs are more than four times higher than younger adults.
- Health expenditures from age 65 until death average $88,000 for a death at age 70 and $240,000 for a death at age 90. [26]

Figure 4. Percent of U.S. Population over Age 65, 1930 - 2050



Source: From Baby Boom to Elder Boom: Providing Health Care for an Aging Population. Washington, D.C. Watson Wyatt Worldwide, 1996

Chronic Diseases Appear Among Young People

Experts are also concerned that chronic diseases are appearing among younger adults, adolescents and children. For example, health care providers and the Centers for Disease Control and Prevention are finding cases of type 2 (adult onset) diabetes among children. [27] While no national trend data yet exist, experts estimate that up to 45 percent of all new diabetes patients are currently being identified in large pediatric centers. [28] Twenty years ago, it was unheard of for children or adolescents to be diagnosed with type 2 diabetes. Additionally, a recent study found that approximately 2 million U.S. adolescents ages 12 to 19 have a prediabetic condition linked to obesity and inactivity that puts them at risk for full-blown diabetes and cardiovascular problems. The condition was found in one in 14 boys and girls with normal weight and one in six overweight adolescents. [29]

Disparities in Access and Quality of Care

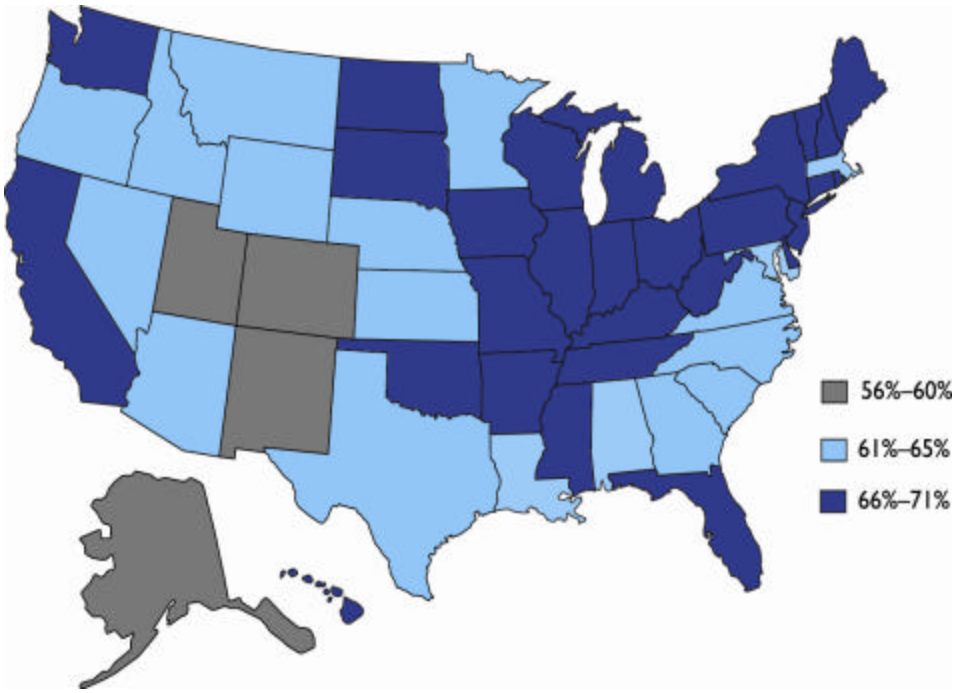
Despite additional spending on health care, many people are still not receiving adequate care. The National Health Disparities Report recently reported startling data about disparities in health care access and quality of care. [30] This report showed that racial and ethnic minorities fared far worse than whites in access to and quality of health care. These findings were similar among blacks, Hispanics, Asians, American Indians and Alaska Natives. Income disparities also exist with low-income people receiving lower quality of care and poorer access to care.

Trends in Chronic Disease Rates

In addition to rising costs caused by medical advances and changing demographic factors, trends in chronic disease prevalence—such as higher diabetes and obesity rates—are also contributing to rising costs. Chronic diseases such as heart disease, cancer and diabetes are the leading causes of disability and death in the U.S. Individual behavior and lifestyle choices influence the development and course of these chronic conditions. Unhealthy behaviors, such as a poor diet, lack of physical activity and tobacco use, are risk factors for many chronic conditions and diseases. Encouraging individuals to adopt healthy habits and practices can reduce the burden of chronic disease in communities throughout the United States. The most recent data available show:

- 1.7 million deaths or 70 percent of all deaths in the U.S. annually are due to chronic diseases.
- 25 million Americans live with a chronic disease that significantly limits their daily activity. [31]
- Chronic diseases account for more than 83 percent of the $1.4 trillion spent on health care in the U.S. annually. [32]
- Five major chronic diseases—heart disease, stroke, cancer, chronic lower respiratory disease and diabetes—cause two-thirds (66.2 percent) of the deaths in the U.S. Figure 5 shows the proportion of deaths due to these chronic diseases in each state in 2001.

Figure 5. Percent of All Deaths Due to Five Major Chronic Diseases* By State, 2001



**Diseases of the heart, all cancers, stroke, chronic lower respiratory disease, and diabetes.*

Source: Centers for Disease Control and Prevention, 2001 mortality data obtained from the National Vital Statistics System, The Burden of Chronic Diseases and their Risk Factors, 2004

Impact of Diabetes

Between 1980 and 2005, the estimated number of people diagnosed with diabetes in the United States more than doubled, from 5.8 million to 14.6 million. [33] An estimated 6.2 million cases are undiagnosed, meaning there are more than 20.8 million Americans with diabetes. [34] Figure 6 shows the trend in diabetes rates among U.S. adults over the last 15 years. Nearly all states have experienced dramatic increases in diabetes among their residents. In addition to the millions of Americans with diabetes, an estimated 41 million U.S. adults age 40 to 74 have prediabetes—that is, their blood sugar level is elevated but is not high enough to be classified as diabetes. People with prediabetes are at high risk for developing diabetes. [35]

Diabetes is one of the most costly conditions Americans face today. It is estimated that $132 billion was spent on diabetes in 2002 in the U.S. This total includes:

- $91.8 billion in direct medical expenditures for care and treatment, and
- $39.8 billion in indirect expenditures resulting from lost work days, restricted activity days, mortality and permanent disability due to diabetes. People with diabetes lost 8.3 days per year from work, accounting for 14 million disability days, compared to 1.7 days for people without diabetes. [36]

Impact of Obesity

It is estimated that 65 percent (130 million) of American adults over age 20 are overweight or obese, while 30 percent (60 million) are obese. [37,38] In 1994, no states reported obesity rates at or above 20 percent. Figure 6 shows that in 2004, 43 states reported that at least 20 percent of their residents were obese, and in nine of these states at least one-quarter of adults were obese. [39] Overweight and obesity have been linked to increased risk for heart disease, stroke, several types of cancer, diabetes, osteoarthritis and other chronic conditions.

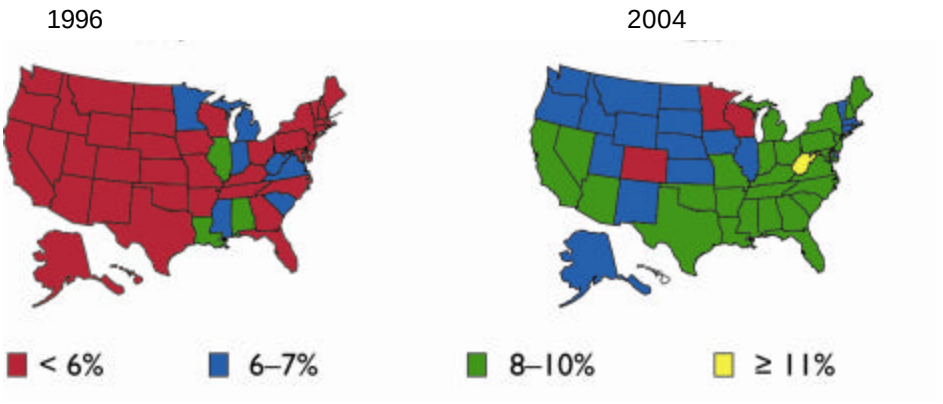
Impact of Cardiovascular Disease—Heart Disease and Stroke

Heart disease and stroke—the principal components of cardiovascular disease—are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40 percent of all deaths. Every year, more than 927,000 Americans die of cardiovascular disease. [40,41] In addition, more than one-fourth (70 million) of Americans live with a cardiovascular disease. [42] More than 6 million hospitalizations each year are due to cardiovascular disease. [43]

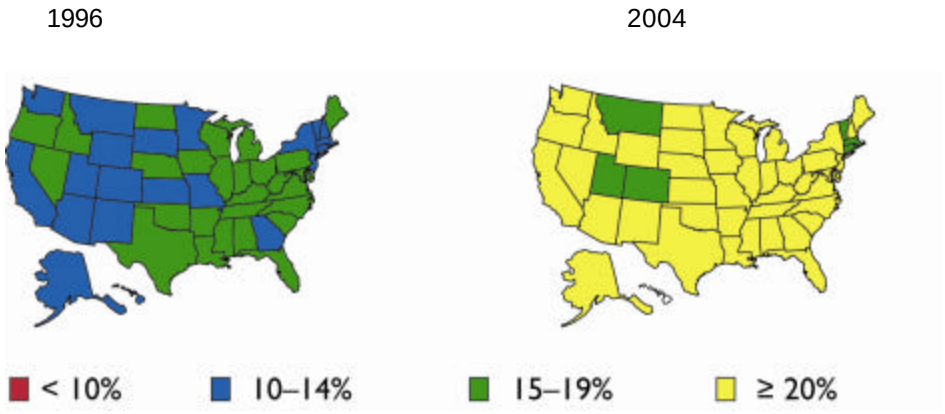
Costs for cardiovascular disease in 2005 are estimated at $394 billion, including health care expenditures and lost productivity from death and disability. [44] Risk factors that can be controlled to prevent heart attacks and strokes include high cholesterol, high blood pressure, obesity and diabetes. Risk behaviors that individuals can change include tobacco use, poor diet and physical inactivity.

Figure 6. Changes in Diabetes and Obesity in the U.S., 1996 and 2004

Percent of U.S. Adults with Diabetes,* by State
(*Includes gestational diabetes)



Percent of U.S. Adults with Obesity,* by State
(*BMI = 30, or about 30 lbs overweight for 5'4" person)



Source: CDC's Behavioral Risk Factor Surveillance System, 1996 and 2004

Impact of Cancer

Cancer, the second leading cause of death among Americans, is responsible for one of every four deaths in the United States. In 2005, an estimated 570,000 Americans died of cancer. Close to 1.4 million new cases were diagnosed that year, many of which were preventable. [45] In 2005, cancers cost this country an estimated $210 billion overall, which included nearly $136 billion for lost productivity and more than $70 billion for direct medical costs. [46]

The number of new cancer cases can be reduced substantially, and many cancer deaths can be prevented. Adopting healthier lifestyles—for example, avoiding tobacco use, increasing physical activity, achieving optimal weight, improving nutrition and avoiding excess sun exposure—can significantly reduce a person's risk for cancer. [47]

State Actions to Control Costs of Chronic Disease

States have implemented disease management programs in recent years to control health care costs. Other states have operated chronic disease prevention programs for many years. Recently, state policymakers have begun reframing chronic disease management and disease prevention programs as part of "wellness programs."

Wellness initiatives include many approaches to both preventing disease in people who are well, and managing diseases and preventing complications in those who are ill. Traditionally, states that have explored disease management have done so as a cost-containment strategy. Chronic disease prevention is a longer-term strategy where it has been harder to evaluate cost-effectiveness. However, some data are now being generated, mostly by the private sector, on the cost benefits and effectiveness of wellness initiatives. The essential components of disease management, chronic disease prevention and wellness initiatives are discussed below.

States Control Costs and Complications through Disease Management

Disease management is used by states to curtail health care costs and keep people well. It is an integrated approach to health care delivery that seeks to improve health outcomes and reduce health care costs.[48] Disease management has a variety of components, but programs involve one or more of the following:

- Establishing a coordinated system of intervention and information sharing for patients with a particular chronic condition or set of conditions and their providers.
- Encouraging health care providers to use established practice guidelines when treating chronic illnesses.
- Educating patients to manage their conditions well and avoid disease complications.
- Monitoring quality of care provided and patient outcomes over time to ensure the program achieves its desired goals.

Disease management is not only a tool to prevent chronically ill patients from further disease and costly treatments, it also involves patients in managing their own care and thereby freeing up scarce health care resources. Nationally, the Centers for Medicare and Medicaid Services (CMS) has been conducting pilot studies on disease management. In 2004, CMS established rules that encourage states to adopt such programs to help chronically ill patients better manage their diseases, improve health outcomes and lower medical costs.[49]

The Power of Prevention—Science-Based Prevention of Chronic Diseases

In addition to disease management as a cost-containment strategy, states have also looked to public health interventions to improve the health of residents. States have been implementing chronic disease prevention programs, health promotion and health education with strong success for many years; however, full cost effectiveness evaluations of these programs are now being conducted.

The *Guide to Community Preventive Services* (Community Guide) is a national resource on proven prevention programs focused on populations, rather than individuals. It contains guidelines developed in the last few years by a national task force responsible for distilling the latest science and research results into recommended preventive services. A companion resource, the *Guide to Clinical Preventive Services,* focuses on medical care recommendations for individual patients. (See Figure 7 for details)

Figure 7. Resources on Science-Based Prevention Guidelines

Guide to Community Preventive Services - The Community Guide is developed by the nonfederal Task Force on Community Preventive Services (Task Force), appointed by the director of the Centers for Disease Control and Prevention (CDC). This group was convened to provide leadership in the evaluation of community, population and health care system strategies to address a variety of public health and health promotion topics such as physical activity. Although convened by the U.S. Department of Health and Human Services, the Task Force is an independent decision-making body. [50]

Guide to Clinical Preventive Services- The U.S. Preventive Services Task Force (USPSTF), first convened by the U.S. Public Health Services in 1984, and since 1998 sponsored by the Agency for Healthcare Research and Quality (AHRQ), is the leading independent panel of private sector experts in prevention and primary care. The USPSTF conducts rigorous, impartial assessments of the scientific evidence for the effectiveness of a broad range of clinical preventive services, including screening, counseling and preventive medications. Its recommendations are considered the "gold standard" for clinical preventive services. [51]

The recommended programs in the Community Guide can be used by state policymakers to choose the most appropriate prevention programs to be:

- required through legislation (e.g. smoking bans),
- included in state-supported health insurance programs for state employees or Medicaid benefit plans (e.g., reducing out-of-pocket costs for smoking cessation programs), or
- endorsed for worksite health promotion programs for state employees or to be adopted by private employers. [52]

The following sections list recommended chronic disease prevention strategies from the Community Guide, and when available, cost-benefit and effectiveness data are included.

Tobacco Use Prevention and Secondhand Smoke Protection

- Stopping the use of tobacco is the most cost-effective method of preventing disease among adults. [53] Studies to date have shown that:
  - Each smoker who successfully quits smoking reduces the anticipated medical costs associated with heart attack and stroke by an estimated $47 in the first year and $853 over the following seven years. [54]
  - One health insurance plan's annual cost of covering treatment to help people quit smoking ranged from 89 cents to $4.92 per smoker, whereas the annual cost of treating smoking-related illness ranged from $6 to $33 per smoker. [55]
- California experienced 33,000 fewer deaths from heart disease from 1989 through 1997 following that state's tobacco control efforts. [56] From 1988 to 2001, lung and bronchus cancer rates in California declined at three times the rate of decline in the rest of the country. [57]

- Following the establishment of the Massachusetts Tobacco Control Program, state rates of smoking during pregnancy dropped sharply, from 25 percent in 1990 to 13 percent in 1996. [58] Eliminating smoking during pregnancy may lead to a 10 percent reduction in all infant deaths from perinatal conditions. [59]
- Providing counseling and support to patients by telephone, when included as one component of a multi-component strategy to help smokers quit, is effective in increasing the number of smokers who succeed. [60] Counseling through a quit line approximately doubles group quit rates at six months.

Promoting Physical Activity and Healthy Eating

Supporting physical activity among children and adults can have significant impact on many of the chronic diseases mentioned above. Getting more exercise and eating healthier foods for most people can result in some weight loss. A sustained 10 percent weight loss will reduce an overweight person's lifetime medical costs by $2,200 to $5,300 by lowering costs associated with hypertension, type 2 diabetes, heart disease, stroke and high cholesterol. [61]

Schools have an important role to play in preventing childhood obesity. Working with other public, voluntary and private sector organizations, schools can play a critical role in reshaping social and physical environments and providing information, tools and practical strategies to help students adopt healthy lifestyles. The CDC has published Key Strategies to Prevent Obesity, guidelines that identify school policies and practices most likely to be effective in promoting lifelong physical activity and healthful eating. [62]

Controlling Blood Pressure and Cholesterol

High blood pressure and cholesterol are linked to three of the biggest killers in the U.S.—heart disease, stroke and diabetes. Controlling these critical health risk factors will have a significant impact on these related diseases. For example:

- Intensified blood pressure control can cut health care costs by $900 over the lifetime of a person with type 2 diabetes, and it can extend life by six months. [63]
- An average reduction of just 12 to 13 points in systolic blood pressure over four years of follow-up is associated with a 21 percent reduction in coronary heart disease, a 37 percent reduction in stroke, a 25 percent reduction in total cardiovascular disease deaths and a 13 percent reduction in overall death rates. [64]
- A 10 percent reduction in serum cholesterol levels can result in a 30 percent reduction in the incidence of coronary heart disease. [65]
- U.S. adults substantially lowered their blood pressure, high cholesterol levels and other heart disease risk factors during the 1980s. As a result, U.S. costs associated with coronary heart disease declined by an estimated 9 percent—from about $240 billion in 1981 to about $220 billion in 1990. [66]

Obtaining Recommended Health Screenings

To prevent chronic diseases and their complications through both population-wide approaches and individual medical treatment, the U.S. Preventive Services Task Force has established specific recommendations for cancer, blood pressure, cholesterol, diabetes and other diseases and risk factors. [67] Screening for colorectal, breast and cervical cancers can reduce illness and death through early detection of cancers and pre-cancers. Screening for blood sugar in people with risk factors for diabetes—or simple checking of feet, eyes and regular periodontal care for diabetics—can prevent costly and debilitating complications. For example:

- Routine screening can reduce the number of people who die of colorectal cancer by as much as 60 percent or more. [68]
- A mammogram every one to two years can reduce the risk of death from breast cancer by approximately 20 to 25 percent over 10 years for women age 40 and older. [69]
- Pap tests can detect precancerous lesions so they can be treated before cervical cancer develops. Researchers in many countries found that rates of cervical cancer death dropped by 20 to 60 percent after screening programs were initiated. [70]
- In just five years, a foot care program can save $900 in health care costs for a person with diabetes who has had foot ulcers. Such care prevents amputations. [71]

Despite these outcomes, many adults are not getting regular lifesaving screenings as recommended.

State Wellness Programs—Promoting Health and Avoiding Costs

Many states have begun to initiate wellness programs, either statewide or focusing on state employees. While each program is unique, most have a core set of program elements which include: tobacco prevention and/or cessation; physical activity promotion; nutrition education and healthy eating promotion; blood pressure and cholesterol control assistance; health screenings and monitoring; and disease management. Additionally, many of these programs offer tools to assist in meeting health goals. Several states have adopted a broader approach to wellness, apart from targeting their own employees. Many of these approaches include a worksite or employee wellness component. States are supporting wellness programs to employees and residents through:

- Employee/worksite wellness programs
- Incentives for private employers to offer wellness programs
- State employee wellness programs
- General population wellness programs

While each program is unique, most have components that address physical activity promotion and healthy eating, and are supplemented by various tools to assist in meeting health goals.

State Official's Guide to Wellness **discusses wellness programs and initiatives in detail. See:** www.healthystates.csg.org

Several studies (highlighted below) have shown that wellness programs are a highly cost- effective solution to preventing chronic diseases and managing patients with chronic diseases. So far, minimal cost data are available to evaluate the large state employee or statewide programs. However, smaller public and private sector initiatives have shown that wellness programs in the workplace can result in significant cost-savings through reduced health care costs, reduced short-term sick leave and increased productivity.

- Delaware implemented a pilot study of its *Health Rewards* program, which examined the fitness of 100 randomly selected state employees. The employees were offered health assessments, counseling and fitness prescriptions.[72] By the end of the study, officials estimated the program had saved the state more than $6,200 per employee.
- Citibank saved $8.9 million over two years on wellness and prevention programs, which cost only $1.9 million. This translates into a return of $4.70 for every dollar spent on the wellness program.[73]
- Motorola's Global Wellness Initiatives[74] included:
    - Disease management (i.e., asthma, cancer, depression, diabetes, infectious disease)
    - Flu immunizations, cancer screenings (mammograms, prostate), smoking cessation
    - Health screenings and health risk appraisals
    - Twenty-four hour nurse telephone line, health fairs
    - Back care
    - On-site/external wellness centers
    - Children's aerobics and nutrition
    - Stress management, shift work wellness

  As a result, Motorola reported $3.93 saved for every dollar invested in its wellness program. In 2000, this translated into savings of nearly $6.5 million. Motorola also showed that:
    - Participating employees saw a nominal 2.5 percent increase in annual aggregate health care costs, compared with an 18 percent annual aggregate increase for nonparticipants.
    - The company saved nearly $10.5 million annually in disability expenses for participants compared with nonparticipants.

- Johnson & Johnson's Health and Wellness Program is credited with saving $8.5 million per year from 1990-1999.[75] This program implemented:
    - Employee Assistance (EAP) and LIFEWORKS Programs to help employees address personal issues and achieve work/life balance
    - Proactive Health Assessments to help employees assess their risk for certain health problems and offer assistance to decrease their risk
    - Workplace Health Programs to help ensure the health and safety of employees
    - Wellness and Fitness Services to offer additional opportunities, such as on-site fitness centers, that address the health and wellness needs of employees
    - Wellness professionals available for individual counseling
    - Health fairs and "Lunch & Learn" sessions

Employee/Worksite Wellness Programs
Illinois, [76] **Maine,** [77] **Massachusetts** [78] and **Mississippi** [79] have implemented programs that provide health promotion or wellness services and work to reduce the prevalence of health risk factors such as tobacco use, physical inactivity and unhealthy eating. Services can include aerobic exercise, blood cholesterol screening, fitness and exercise testing, health risk appraisals, blood pressure screening and education, nutrition education, smoking cessation, stress management and weight loss. Several states—including **Delaware, Kentucky, Ohio, Oklahoma, Rhode Island** and **South Dakota**—have implemented state employee wellness programs featuring similar programs and services. [80] Key components include a Web site, tool kits and incentives for participating employees.

In addition, **Colorado** [81] passed a resolution that encourages residents, schools, workplaces and parents to incorporate healthy eating choices in the home, promote a tobacco-free lifestyle and stress the importance of regular physical activity.

Incentives for Private Employers to Offer Wellness Programs
New Jersey, [82] **Hawaii** [83] and **New Mexico** [84] considered, but did not pass, legislation that offers business tax credits and gross income tax credits for employer expenditures to provide certain physical fitness benefits to employees. These "qualified wellness program expenses" would have included tax benefits to companies that paid for cardiac or pulmonary rehabilitation programs; diabetes prevention and control programs; alcohol- and substance-abuse prevention programs; smoking cessation programs; health and fitness club memberships; supervised weight-loss programs and supervised exercise programs.

General Population Wellness Programs
Some states have adopted a broader approach to disease prevention and health promotion, targeting the general state population. Many of these approaches include a worksite or employee wellness component. **Arkansas,** [85] **North Dakota** [86] and **Vermont** [87] are examples of statewide programs that aim broadly at the general population and focus on increasing physical activity, improving nutrition and avoiding tobacco. Public education, media campaigns and community-based programs are primary methods of promoting wellness to the general population.

Conclusion and Future Trends

The trends in chronic diseases presented here are cause for concern, but the policy options available to states are cause for hope. Left unchecked, health care cost trends will continue to consume more public funds. As health care costs consume more of the gross domestic product, fewer dollars will be available from the federal government to assist state and local governments in a wide array of services; less money will be available to fund other priorities such as roads and social services; and taxes may need to be raised to balance budgets.

The trends discussed above are not only trends from the last few years, they also will affect states and the entire nation for the foreseeable future. The baby boomers will begin to turn 65 this decade, and as this large group continues to age, there will be more people with chronic diseases and who have significantly higher medical care costs than younger and healthier Americans. If there are no significant changes, along with more forecasted disease among the

older population, we will continue to see more children enter their teen years, college and adulthood with diabetes, high blood pressure and other effects of overweight, physical inactivity and unhealthful eating. Some experts estimate that the generation growing up today will be the first to live a shorter life than their parents and grandparents. This will have a tremendous effect on public resources and the ability of public agencies to provide health care and social services, while draining a critical U.S. resource—the work force.

Evidence shows that it is never too late to stop smoking, become physically active and eat healthy foods. More detailed information about wellness programs and the burden of chronic diseases can be found in CSG's document, *A State Official's Guide to Wellness*. As policymakers implement wellness and other health initiatives, these basic healthy lifestyle elements and obtaining health screenings are pivotal to success. Over the next decade it will be important to encourage everyone in the U.S. to adopt healthy behaviors. At the same time, as states begin to offer wellness programs to employees and to the general public, more emphasis should be placed on evaluating the effectiveness of these programs and their related outcomes and costs. So far, little effectiveness data are available from public sector programs, a key difference from private sector wellness programs. Through the evaluation of effective programs and review of cost data, best practices can be discerned and recommended for others to replicate.

Population-wide public health approaches such as wellness promotion, disease prevention and health education, as well as disease management, show the most promise for reining in health care costs. State policymakers have shown leadership by implementing unique policies and programs to promote health and wellness. To control chronic diseases and their costs, policymakers can emphasize prevention, while maintaining services for those who are already ill. Without sustained attention to this problem now, policymakers will be faced with unpleasant decisions in the years ahead when health care outstrips education funding in state budgets. By acting swiftly, policymakers can prevent significant economic costs and chronic diseases.

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