Health Cost Containment and Efficiencies

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Public Health and Cost Savings

Cost Containment Strategy and Logic

Public health programs —also known as population health— protect and improve the health of communities by preventing disease and injury, reducing health hazards, preparing for disasters, and promoting healthy lifestyles—the focus of this brief. Healthy lifestyles include good nutrition, regular physical activity, not smoking and other behaviors to improve or restore health that can be promoted through healthy community environments.

Public health is concerned with prevention rather than treatment and with populations rather than individual health. Examples of public health initiatives include school nutrition standards, community education and screening programs, enhanced neighborhood recreational opportunities, breastfeeding promotion, smoking cessation and prevention programs, and regulation of dangerous and potentially harmful activities such as riding a bicycle without a helmet or drunk driving.

By preventing people from developing chronic diseases, population-based health programs can reduce Medicaid and state employee health care costs. They also can contain costs by preventing people from developing disabilities or conditions that would make them Medicaid-eligible.

Trust for America's Health, estimates that an additional investment of $10 per person per year in proven programs to increase physical activity, improve nutrition and prevent tobacco use could save the country more than $16 billion annually within five years. This includes an estimated $1.9 billion in Medicaid savings annually within five years.[1]

Target of Cost Containment

The primary target of public health promotion programs are chronic and infectious diseases. Chronic diseases are among the most prevalent, costly and preventable of all health problems. Changing behaviors associated with a higher incidence of chronic disease and disability–known as modifiable health risk factors—can lead to improved health and longevity. Studies show that people with few health risks have one-fourth the disability of those with more risk factors, and the onset of disability is postponed from seven to 12 years.[2]

Physical inactivity, poor diet and risky behaviors—along with social and environmental factors such as low income, limited education, poor housing, lack of neighborhood safety and toxic exposures—account for 60 percent to 70 percent of premature deaths.

Evidence indicates public health programs improve health, extend longevity and can reduce health care expenditures.

Chronic disease is the largest and fastest growing share of both public and private health expenditures, accounting for more than 75 percent of U.S. health care costs. Obesity—increasingly a focus of public health programs—is associated with such costly conditions as diabetes, heart disease, arthritis and complications during pregnancy. Adult obesity costs the country between $147 billion and $168 billion in increased medical expenditures, half of which is financed by Medicare and Medicaid.

Although most chronic diseases can be prevented or delayed, prevention accounts for only 5 percent to 9 percent of health care spending. The balance goes to treat disease and injuries after they occur. Surgeon General Regina Benjamin has called for a move from a system of sick care to one based on wellness and prevention. To achieve this, the National Prevention and Health Promotion Council recommended in September 2010 creating "community environments that make the healthy choice the easy and affordable choice."

Federal Health Reform

The Patient Protection and Affordable Care Act of 2010 includes several public health provisions. Among other things, the act establishes a Prevention and Public Health Fund for expanded national investment in public initiatives, health screenings and prevention research (section 4002). Public health initiatives include competitive Community Transformation Grants, a preventive benefits education and outreach campaign, and immunization programs. States can apply for Community Transformation Grants to reduce chronic disease rates, prevent development of secondary conditions, address health disparities, and develop a stronger prevention programming evidence base. The act appropriates $500 million to the Prevention and Public Health Fund for FY 2010. Appropriations increase by $250 million per year to $2 billion for FY 2015 and each year thereafter.[3]

The act authorizes a demonstration program to award grants to states to improve immunization rates in high-risk populations (section 4204) and a five-year national oral health prevention and public education campaign (section 4102). It provides $50 million for five-year pilot program awards to state or local health departments and Indian tribes for public health community interventions, screenings and, where necessary, clinical

referrals for people between the ages of 55 and 64 (section 4202).

State Examples[4]

- **School programs to promote lifelong healthy habits**. Arkansas passed landmark legislation in 2003 (2003 Ark. Acts, Act 1220) and 2007 (2007 Ark. Acts, Act 201) to combat childhood and adolescent obesity. Students in kindergarten through grade 10 are required to have a body mass index screening every other year; results are reported to parents confidentially. The legislation eliminated access to vending machines in public elementary schools and established a statewide Child Health Advisory Committee to recommend public school physical activity and nutrition standards. Texas (SB 530, 2007) requires kindergarten through grade five public school students to participate in moderate or vigorous physical activity for at least 30 minutes daily throughout the school year. The Mississippi Healthy Students Act (SB 2369, 2007) requires local school wellness plans to promote increased physical activity, healthy eating habits, and abstinence from tobacco or illegal drug use. Oregon (HB 2650, 2007] prohibits trans fats and specifies minimum standards for food and beverages sold in public schools.

- **Taxes and tax credits to discourage, promote or support certain behaviors.** Examples of public health-related tax policies that states have considered or enacted include tax credits for fitness or wellness choices; enacting or increasing taxes on foods and beverages that have minimal nutritional value; and directing tax revenues raised to fund health-related services, such as tobacco cessation education programs.

- **Laws to encourage community designs that promote physical activity**. A 2009 Wisconsin law (2009 Wis. Laws, Act 28) requires the Department of Transportation to ensure all new highway construction and reconstruction projects include bikeways and pedestrian ways. It appropriated $5 million for the 2009-11 biennium for bicycle and pedestrian facilities.

- **Strategies to discourage tobacco use**. Examples include increasing tobacco taxes, restricting the sale and distribution of cigarettes, prohibiting smoking in certain places, funding enhanced enforcement of tobacco control laws, requiring health plans to cover tobacco cessation counseling, school health education, quit lines and media campaigns. As of January 2010, for example, 26 states and the District of Columbia required most public places and workplaces to be smoke-free.[5]

- **Initiatives to discourage alcohol abuse.** Heavy drinking and binge drinking are associated with many chronic illnesses, such as cancers of the liver, mouth, throat, larynx and esophagus; liver cirrhosis; pancreatitis; and psychological disorders. One strategy states use to discourage excessive drinking and driving are ignition interlocks. As of November 2010, Alaska, Arizona, Arkansas, Colorado, Hawaii, Illinois, Louisiana, Nebraska, New Mexico, New York, Utah and Washington required or gave incentives for use of ignition interlocks (e.g., allowed for installation in lieu of license revocation) by all convicted drunk drivers, even first-time offenders.[6]

- **Breastfeeding promotion.** Studies show breast milk protects infants from bacteria and viruses, and mothers who breastfeed reduce their risk of pre-menopausal breast cancer and osteoporosis. Laws in 44 states, the District of Columbia and the Virgin Islands specifically allow women to breastfeed in any public or private location.[7] Laws in 24 states, the District of Columbia and Puerto Rico are related to breastfeeding in the workplace.[13] The Patient Protection and Affordable Care Act requires, with some exceptions, employers to provide break time and a private place for a nursing mother to express breast milk (section 4207).

Evidence

Evidence indicates public health programs improve health and extend longevity and can reduce health care spending. Extensive research documents the health benefits of more Americans exercising, losing weight, not using tobacco, driving safely and engaging in other healthy habits. Less clear is the effect on total health care costs.

There are three measures of public health program success. **Cost-savings** measures net program savings (i.e., amount saved minus program expenses). An effective health promotion program may not be cost-effective; a cost-effective program may not be cost-saving. **Cost-effectiveness** assesses whether the additional benefit of a program (e.g., improved health or longevity) is worth the additional cost (i.e., good value for the dollar). **Effectiveness** measures the degree to which a program has its intended effect (e.g., increases physical activity).

Cost-Saving Initiatives

- Examples of public health initiatives that reduce total health care expenditures include:[9]
  - childhood immunizations;
  - screening and follow-up counseling for problem drinking;
  - vision screening for seniors;
  - fluoridated community water systems;
  - tobacco use screening, advice and assistance, smoking cessation programs for women, and comprehensive tobacco prevention programs;
  - family planning;
  - tuberculosis screening in high-risk populations;
  - lead abatement in public housing; and
  - the Women, Infants and Children (WIC) program.[10]

- According to the Congressional Budget Office (CBO), population-based strategies to reduce tobacco use reduce Medicaid spending. Lower rates of tobacco use in the general population result in fewer low birth-weight babies who have higher health care costs at birth and afterward.

■ Several studies document net savings for certain types of public health programs but do not report their effect on total health care costs. A 2007 California report on cost-saving prevention programs, for example, noted that the California Tobacco Control Program saved more than $3 billion in smoking-caused health care costs between 1990 and 1998.[11] California's motorcycle helmet law saved $48 million in direct medical costs during the first five years after implementation.

■ Studies show that multi-pronged strategies (e.g., comprehensive, multi-component tobacco cessation initiatives) hold the greatest potential for cost savings. Health promotion efforts are more likely to be cost-saving when directed to high-risk populations rather than the general population, unless a relatively large number of cases can be prevented.

■ Research indicates that over the life span, most health promotion and prevention programs, other than the ones listed in this section, increase overall spending, even while improving health and longevity. Increased spending results primarily from increased costs associated with diseases other than those targeted by the efforts. According to the director of the CBO, "Even if a preventive service lowers a beneficiary's risk of illness, a longer lifespan allows for more time to incur other health care expenses associated with age."[12] In the case of screening tests, additional spending may arise from treatment of newly diagnosed conditions as well as treatment stemming from tests yielding false positive results, which indicate a disease is present when it is not.

Population-based strategies to reduce tobacco use reduce Medicaid spending, according to the Congressional Budget Office.

Cost-Effective Initiatives

■ Examples of public health prevention strategies that improve health at a relatively low cost include:[13]

- immunization requirements for school entry;
- mandatory motor vehicle occupant restraints;
- primary school education on reducing sun exposure to prevent skin cancer;
- home visitation to prevent child abuse or neglect and avoid injuries;
- multi-component community-wide campaigns to encourage people to be more physically active, including media messages, counseling, education classes, community events and more opportunities for physical activity, such as walking trails;
- influenza and pneumococcal vaccines for adults; and
- screenings for high blood pressure, high cholesterol and problem drinking.

Effective Initiatives

■ Evidence exists for the effectiveness, but not necessarily cost-effectiveness, of other public health initiatives to encourage healthy behaviors. Examples include:[14]

- enhanced school-based physical education to increase physical activity;
- school-based educational programs to reduce alcohol-impaired driving;
- laws that create liability for establishments selling alcohol to visibly intoxicated people who cause injury to others;
- mandated bicycle helmet use and primary seat belt enforcement laws to prevent injury;
- smoke detector give-away programs; and
- community-level individual and group HIV prevention behavioral interventions to reduce risky sexual behavior.

■ Other interventions may be effective, but evidence is not conclusive. Examples include modifying vending machine options to increase and promote healthy beverage choices; increasing the availability of fruits, vegetables and other nutritious food options; restricting alcohol sales at public events; mass media campaigns to encourage breast, cervical and colorectal cancer screenings; and school-based programs to control overweight and obesity.

■ An assessment of the Arkansas act to combat childhood obesity described earlier found that, six years after the law's implementation, school environments were healthier and family awareness of the serious health problems associated with childhood obesity had increased.[15] Adolescents reported increased physical activity, fewer vending machine purchases and reduced soda consumption. Preliminary evidence suggests adolescents may be eating less fast food. Since Arkansas passed its landmark legislation, steadily rising childhood obesity rates, which are among the highest in the country, leveled off. Some other states have seen a similar leveling of obesity rates since 2003-2004.[16] Still, 32 percent of U.S. children remain overweight or obese.

Beyond Costs: Improved Health, Longevity, Productivity

Health promotion and prevention programs can improve health and extend longevity. According to a report by Trust for America's Health, the return on investment for community-based programs not only defers high health care costs to the end of life, but also ensures more people will be healthier for longer periods of their life. Although some initiatives may increase costs, most people consider improved health over a longer lifespan worth it. A 2009 poll found 72 percent of Americans agree that, "Investing in prevention is worth it even if it doesn't save us money because it will prevent disease and save lives."[17]

Successful public health programs yield not only health and longevity benefits but also non-medical benefits, such as productivity gains from improved worker health and lower auto insurance premiums due to fewer drunk driving related accidents. Unfortunately, assessments of the economic benefits of successful health prevention and promotion efforts rarely take into account non-medical savings.

Challenges

A number of challenges exist to successful implementation of cost-saving public health programs. While some programs yield savings in the near-term, others may take as long as 10 to 25 years. Personal behaviors are difficult to change and, once modified, may not demonstrate health and economic benefits for a long time. Savings from public health investments often accrue mainly to other payers (e.g., insurance companies, individuals, workers) rather than the state. Because the benefits of medical care sometimes are more immediate than public health programs, winning public and policymaker support for increased public health spending can be difficult. Although public health strategies that prohibit or increase the cost of engaging in unhealthy behaviors may be some of the most cost-effective (e.g., passenger seat belt mandates, higher tobacco sales taxes), they may meet opposition from affected interest groups or those who see them as government interference or limiting to personal freedom.

For More Information

Booske, Bridget, et al. *What Works? Policies and Programs for a Healthier Wisconsin.* Madison, Wis.: University of Wisconsin Population Health Institute, July 2009; http://uwphi.pophealth.wisc.edu/pha/healthiestState/whatWorks.pdf.

Task Force on Community Prevention Services. "The Community Guide: What Works to Promote Health," website updated regularly, http://www.thecommunityguide.org/about/task-force-members.html.

Winterfeld, Amy, Douglas Shinkle and Larry Morandi. *Promoting Healthy Communities and Preventing Childhood Obesity: Trends in Recent Legislation.* Denver: National Conference of State Legislatures, February 2010; http://www.rwjf.org/files/research/20100419promotinghealthycommunities.pdf.

The latest information on this topic is available in an online supplement at www.ncsl.org/?tabid=19939.

Notes

1. Trust for America's Health, *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities* (Washington, D.C.: TAH, February 2009); http://healthyamericans.org/reports/prevention08/Prevention08.pdf.

2. James Fries, "Measuring and Monitoring Success in Compressing Morbidity," *Annals of Internal Medicine* 139 no. 5, part 2 (Sept. 2, 2003); http://www.scribd.com/doc/41479853/Compresion-Morbilidad-Fries-Annals-2003.

3. The secretary of Health and Human Services redirected $253 million of the FY 2010 appropriation to primary care workforce expansion and improvement.

4. Examples in this section are from Amy Winterfeld, Douglas Shinkle, and Larry Morandi, *Promoting Healthy Communities and Preventing Childhood Obesity: Trends in Recent Legislation* (Denver: National Conference of State Legislatures, March 2009 and February 2010).

5. The states or jurisdictions are Arizona, California, Colorado, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New Mexico, New York, Ohio, Oregon, Rhode Island, South Dakota, Utah, Vermont, Washington, Wisconsin and the District of Columbia. (Source: American Lung Association, State of Tobacco Control website, http://www.stateoftobaccocontrol.org/2009/overview-key-findings/smokefree-air.html.)

6. Drunk Driving Laws, Governors Highway Safety Association webpage, http://www.ghsa.org/html/stateinfo/laws/impaired_laws.html.

7. States that specifically allow women to breastfeed in any public or private location are Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Washington, Wisconsin and Wyoming.

8. States with breastfeeding in the workplace laws are Arkansas, California, Colorado, Connecticut, Georgia, Hawaii, Illinois, Indiana, Maine, Minnesota, Mississippi, Montana, New Mexico, New York, North Dakota, Oklahoma, Oregon, Rhode Island, Tennessee, Texas, Vermont, Virginia, Washington and Wyoming.

9. Association of State and Territorial Health Officers, *Public Health Yields Excellent Returns on Investment* (Arlington, Va.: ASTHO, April 2009); http://www.astho.org/Display/AssetDisplay.aspx?id=2819, and Stephen H. Woolf, "A Closer Look at the Economic Argument for Disease Prevention," PowerPoint presentation, Congressional briefing (Feb. 24, 2009); http://prevent.org/data/files/initiatives/woolf2-4-09slides.pdf.

10. WIC provides supplemental foods, health care referrals and nutrition education to low-income pregnant, postpartum women, and to infants and children up to age 5 who are at nutritional risk.

11. Prevention Institute, The California Endowment, and The Urban Institute, *Reducing Health Care Costs through Prevention* (Oakland, Calif.: Prevention Institute, August 2007); http://www.preventioninstitute.org/index.php?option=com_jlibrary&view=article&id=79&Itemid=127.

12. Letter from Douglas W. Elmendorf, director, Congressional Budget Office, to the Honorable Nathan Deal, Subcommittee on Health Committee on Energy and Commerce (sic), U.S. House of Representatives, Aug. 7, 2009; http://www.cbo.gov/ftpdocs/104xx/doc10492/08-07-Prevention.pdf.

13. Steven H. Woolf, *The Economic Argument for Disease Prevention: Distinguishing Between Value and Savings* (Washington, D.C.: Partnership for Prevention, February 2009); http://www.prevent.org/data/files/initiatives/economicargumentfordiseaseprevention.pdf.

14. Bridget Booske et al., *What Works? Policies and Programs for a Healthier Wisconsin* (Madison, Wis.: University of Wisconsin Population Health Institute, July 2009); http://uwphi.pophealth.wisc.edu/pha/healthiestState/whatWorks.pdf.

15. Arkansas Center for Health Improvement, *Assessment of Childhood and Adolescent Obesity in Arkansas, Year Six (Fall 2008 - Spring 2009)* (Little Rock, Ark.: ACHI, December 2009); http://www.achi.net/publications/091210%20BMI%20State%20Report.pdf.

16. Tara Parker-Pope, "Hint of Hope as Child Obesity Rate Hits Plateau, *The New York Times,* May 28, 2008: http://www.nytimes.com/2008/05/28/health/research/28obesity.html.

17. Greenberg Quinlan Rosner Research, *Americans Overwhelmingly Support Investment in Prevention* (Washington, D.C.: GQR, May 18, 2009); http://healthyamericans.org/assets/files/health-reform-poll-memo.pdf.

About this Project

NCSL's Health Cost Containment and Efficiency Series describes multiple alternative state policy approaches, with an emphasis on documented and fiscally calculated results. The project is housed at the NCSL Health Program in Denver, Colorado. It is led by Richard Cauchi, program director, and Martha King, group director, with Barbara Yondorf as lead researcher.

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