The old adage about an ounce of prevention being worth a pound of cure is certainly true from a health perspective, but whether the dollars and cents add up is a matter of debate.

Many are looking to prevention to help bring down costs for the health reform efforts currently underway in Congress. Others doubt that prevention can cut costs, but feel meaningful health reform must move our health care system away from managing disease toward preventing disease in order to improve the nation's health.

Because prevention encompasses such varied activities, it is often difficult to adequately measure the success of many prevention efforts, from both a clinical and economic perspective, which can complicate the current debate.

The prevention of illness is a wide-ranging effort that entails changing both people's behavior and their surroundings. It requires interventions that take place in both the community and clinical settings.

Prevention enlists clinicians, educators, insurers, employers and all levels of government. It includes activities that prevent illnesses from ever occurring, such as immunization, and those that minimize or manage the impact of existing illnesses.

In thinking of ways to prevent disease, governments and researchers are increasingly focusing on the factors other than health care that affect health. Their efforts are encouraged by employers and payers looking for ways to improve value and reduce costs.

Researchers believe that hundreds of thousands of lives could be saved annually if people stopped smoking, lost weight, exercised regularly and consumed a healthy diet. Yet prevention accounts for only 2 to 3 percent of spending on health care.

Says Jim Marks of the Robert Wood Johnson Foundation: “We have to face the fact that the likelihood of initially becoming ill or suffering an injury is really about how much they eat, whether one is active, the safety of a neighborhood, the toxins, microbes, or conditions people are exposed to where they live, work, learn and play.”

There are three types of prevention: primary, secondary and tertiary. Primary prevention focuses on community-related activities designed to prevent diseases from occurring at all. Secondary prevention concerns itself with detecting disease before it becomes symptomatic. Tertiary prevention is aimed at slowing the progress of diseases once they occur.

Intel Corporation’s Health for Life program for its employees typically saves $3 for every dollar spent, the company says. Health promotion is an important part of the program.

Kaiser Permanente’s ALL tertiary prevention program for high-risk diabetics is projected to save as much as $38 million annually and avoid 8,000 hospitalizations when fully implemented.

The Congressional Budget Office has declined to attribute savings to prevention provisions in leading health reform proposals.
Secondary prevention concerns itself with detecting disease before it becomes symptomatic. Much of this falls in the realm of clinical prevention, such as colonoscopy, mammography, and bone density testing.

Tertiary prevention is aimed at slowing the progress of diseases once they occur. Controlling hypertension to prevent stroke, lowering cholesterol to prevent heart disease and modifying diet and exercise to control diabetes are all examples of tertiary prevention. Tertiary prevention is where most prevention funding is spent.

Prevention in the U.S. involves a broad range of providers, state and federal governments, employers, payers and educators. The Department of Health and Human Services (HHS) is charged with prevention activities at the federal level. Prevention is a component of Healthy People 2010, a set of national health objectives developed by HHS in consultation with other departments and experts in many fields. These objectives are meant to be used by states, communities, professional organizations and others to help set targets, and to develop policies and programs to improve health.

The main agencies of HHS involved in prevention activities are the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Agency for Health Care Research and Quality (AHRQ). CDC is the nation’s lead agency to detect disease and determine its type, source and distribution in the population. CDC allocates funds to states and local communities for prevention activities, such as chronic disease prevention and health promotion, diabetes control, environmental health, HIV prevention, immunizations and infectious disease prevention.

The Heart Disease and Stroke Prevention Program is one example of a major CDC prevention initiative. The CDC awards grants to states to conduct programming focused on, among other things, controlling blood pressure and cholesterol, awareness of heart disease and stroke signs and symptoms.

CDC supports the U.S. Task Force on Community Preventive Services. This independent, blue ribbon panel conducts systematic reviews of evidence on the effectiveness of policies and programs designed to prevent disease and injury.

Community preventive services occur apart from interaction between individuals and their health care providers. Examples include smoke free workplace policies and systems to remind providers to vaccinate patients. Task Force recommendations are compiled in “The Guide to Community Preventive Services,” better known as “The Community Guide” (www.thecommunity guide.org).

Research on disease prevention is one major component of NIH’s mission. It has a broad portfolio of prevention research and training, as well as programs to disseminate the findings to scientists, health professionals, communities, and the public.

AHRQ is the main federal agency that deals with clinical prevention. AHRQ sponsors the U.S. Preventive Services Task Force (USPSTF), an independent panel of non-federal experts in prevention and primary care. The USPSTF conducts rigorous assessments of the scientific evidence for the effectiveness of a broad range of clinical preventive services, including screening, counseling and preventive medications.

The USPSTF evaluates the benefits of individual services, makes recommendations about which preventive services should be incorporated routinely into primary medical care and for which populations, and develops a research agenda for clinical preventive care.

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Examples of Cost-Effective Prevention

The Centers for Disease Control and Prevention attributes savings to the following preventive measures:

- For every $1 spent on water fluoridation, $38 is saved in dental restorative treatment costs.
- For each $1 spent on the Safer Choice Program (a school-based HIV, other STD, and pregnancy prevention program), about $2.65 is saved on medical and social costs.
- Every $1 spent on preconception care programs for women with diabetes, can reduce health costs by up to $5.19 by preventing costly complications in both mothers and babies.
- Implementing the Arthritis Self-Help Course among 10,000 individuals with arthritis will yield a net savings of more than $2.5 million while simultaneously reducing pain by 18 percent among participants.
- A mammogram every 2 years for women aged 50–69 costs about $9,000 per year of life saved. This cost compares favorably with other widely used clinical preventive services.
- Implementing proven clinical smoking cessation interventions would cost an estimated $2,587 for each year of life saved, the most cost-effective of all clinical preventative services.

Source: Centers for Disease Control and Prevention. “Chronic Disease Overview.” (www.cdc.gov/NCCdphp/overview.htm)
Recognizing that the health of their residents is an economic as well as health concern, state governments are becoming more involved in prevention.

Dr. Judy Monroe, Indiana’s health commissioner, offered details at the June 2009 briefing: “We actually changed the mission statement at the health department to say that the mission ...is to support the economic prosperity and quality of life of the citizens of Indiana, because we want to be able to attract jobs and have a strong economy,” she said.

To this end, Governor Mitch Daniels kicked off InShape Indiana to address nutrition, physical activity and tobacco use. The state sponsors health summits, maintains a prevention-focused website, and engages partners such as grocery stores and prominent athletes to work on education campaigns.

For example, the state is working on a childhood obesity campaign that will include public service announcements and a school curriculum. Supermarkets will support the education campaign by designating healthy foods in their stores.

In addition to governments, many employers, such as Intel, are seeing the benefits of encouraging their employees to live healthier lives in order to promote productivity and reduce health care costs.

Intel began its Health for Life program in 2006. It starts with a health risk evaluation which includes a biometric assessment for its employees followed by a face-to-face meeting with a health coach. After three years, more than 80 percent of the company’s U.S.-based employees have completed this program. Early data suggest that Intel is seeing a 3-to-1 return on investment for health and wellness spending, according to Alice Baker Borrelli, director of global health and workforce policy for the firm.

In addition, Intel is introducing an on-site primary care facility to one of its offices. And in cooperation with other major companies as part of the Dossia employer consortium, Intel is working on making a confidential, digital personal health record (PHR) available to its employees.

Dossia was founded three years ago by AT&T, Applied Materials, BP, Cardinal Health, Intel, Pitney Bowes, Sanofi Aventis and Wal-Mart. Wal-Mart is already making the PHR available to its employees. Intel plans to go online next year.

Intel’s internal research suggested the importance of PHRs to help employees monitor vital signs and address chronic care in real time.

The company would like to see health reform enable broader access to PHRs. Intel views this as important to cost containment, and thinks that it will help individuals manage more of their own care. Said Borrelli, “Patient access in real time will be a really significant factor in price control.”

Insurers also can play a role in prevention. They can shape payment policy for providers that encourage the use of preventive care. They can also create financial incentives for members to use health and wellness benefits by doing things such as offering discounts on gym memberships or lowering co-pays for preventive services.

For example, Kaiser Permanente has aggressively used advanced health information technology, as well as tertiary and community-based prevention to improve the health of its membership. According to Kaiser, colorectal cancer screening has increased 20 percent among members in the past two years. Kaiser’s data also find that its members are 30 percent less likely to die of a heart attack than nonmembers in Northern California and only nine percent of members now smoke compared to the national average of 14 percent. Raymond Baxter, Kaiser Permanente’s senior vice president for community benefit, research and health policy, believes the success is due to “complete engagement of staff and a focus on a set of simple steps known to work.”

Kaiser believes that some of its preventive measures have had a positive impact on cost as well as health. The

Can Prevention Cure the Cost Conundrum?

While policy makers had hoped that savings from prevention would be a way to finance health reform, the Congressional Budget Office (CBO) dashed the hopes of many in Congress. It declined to attribute savings to prevention provisions in estimating the overall costs of some leading health reform proposals. According to the CBO, while these health and wellness provisions might improve patient health, the evidence that they could save money is mixed.

Among the reasons CBO cited for not recognizing prevention as a cost saver:

- insufficient clinical evidence exists for the effectiveness of many prevention measures;
- the cost of an intervention for many who would receive it might far outweigh the later health spending saved on disease avoided; and
- specific provisions might shift costs of prevention away from the private sector to government.

company’s ALL program—a regimen of aspirin, Lovastatin and Lisinopril for high-risk diabetics—is only 40 percent implemented. Yet, judging from results so far, when fully implemented the program would avoid 8,000 hospitalizations and save $38 million annually, said Baxter.

While the benefits of prevention from a public health standpoint are clear, whether prevention can control costs is an area of some controversy. For instance, though there may be evidence that controlling weight saves lives, it does not necessarily follow that all of the programs designed to get people to drop pounds will save lives, much less save money.

Prevention efforts are often targeted at many more individuals than would get the targeted disease in the absence of the preventive measure. So while the cost effectiveness of mammography or colorectal cancer for someone whose disease is caught early may be clear, it is very costly to provide this screening to all those who would never get the disease.

Some research indicates that medications for hypertension and elevated cholesterol, and screening and early treatment of cancer actually increase costs compared to doing nothing. In contrast, screening and treatment for osteoporosis and pneumonia vaccination have been found to be cost effective.

Prevention policy is already playing a major role in the unfolding health reform debate. As part of the Obama Administration’s early health reform activity, the American Recovery and Reinvestment Act of 2009 provides $1 billion toward prevention. Of this amount, some $650 million will go for community-based prevention and wellness programs, and $300 million to expand immunization programs.

Prevention will likely continue to play a role as Congress struggles to improve quality and cut costs in reform bills. (The Congressional Budget Office does not, however, agree with those in Congress who believe that prevention can demonstrably reduce spending. See text box, “Can Prevention Cure the Cost Conundrum?”)

Raymond Baxter suggests the debate over prevention may be more productively reframed away from simple cost containment. “The issue here is: Is a preventive intervention providing greater value over the long-term?”

For the sources used in writing this issue brief, email info@allhealth.org or call 202/789-2300.

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**Expert sources**

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- **James Marks**, Robert Wood Johnson Foundation 609/627-7584
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- **Sue Nelson**, American Heart Association 202/785-7912
- **Louise Russell**, Rutgers 732/932-6507

**Websites**

- **Alliance for Health Reform** [www.allhealth.org](http://www.allhealth.org)
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- **Campaign for Tobacco-Free Kids** [www.tobaccofreekids.org](http://www.tobaccofreekids.org)
- **Centers for Disease Control and Prevention** [www.cdc.gov](http://www.cdc.gov)
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For additional experts and websites on this and other subjects, go to [www.allhealth.org](http://www.allhealth.org)