

1 The Role of Clinical Preventive Services in Disease Prevention and Early Detection



Overview:

Information for employers on improving beneficiary health and reducing healthcare costs through the implementation of comprehensive and structured clinical preventive service benefits within a medical benefit plan. Sections include:

- Promoting Health and Reducing Costs
- The Importance of Preventing Chronic Disease
- The Value of Prevention: Cost-Effective, Cost-Saving, and High-Value Clinical Preventive Services
- Promoting Effective Clinical Preventive Services

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The Role of Clinical Preventive Services in Disease Prevention and Early Detection

Clinical Preventive Services: Preventing Disease, Promoting Health, and Reducing Healthcare Costs

The goals of prevention are to:

- Encourage individuals to avoid or delay disease by practicing healthy lifestyles;
- Identify individuals who could benefit from treatment for a condition or complication about which they are unaware; and
- Prevent further disability among individuals with established disease.

There are three types of prevention: primary prevention, secondary prevention, and tertiary prevention. *Primary prevention* is the prevention of a disease before it occurs; *secondary prevention* is the early detection and treatment of disease to prevent progression; and *tertiary prevention* is an intervention to reduce the amount of disability caused by a disease.¹⁻²

Definition Box 1.0: Prevention

Prevention Helps Individuals Avoid Disease

Primary prevention is aimed at preventing the onset of disease. One way of doing this is by controlling risk factors in healthy people that may lead to disease. Examples of primary prevention include 1) immunizations to prevent communicable diseases such as influenza or polio, and 2) the promotion of physical activity to prevent conditions such as obesity that can lead to disease (e.g., type 2 diabetes).

Prevention Modifies Risk

Secondary prevention is aimed at treating a disease after its onset, but before it causes serious complications. Secondary prevention includes 1) identifying individuals with established disease, and 2) treating those individuals in a timely way so as to prevent further problems (e.g., mammography screening to detect and treat breast cancer in its earliest stages).

Prevention Reduces Disability

Tertiary prevention is aimed at treating the late or final stages of a disease so as to minimize the degree of disability caused by that disease (e.g., administering a foot check to a person with diabetes to identify infections that would require amputation if left untreated).¹⁻²

There are several different approaches to providing preventive services:

Clinical preventive services, the focus of this guide, include those services that are typically performed in a clinical setting and are conducted by a health professional such as a physician, nurse practitioner, physician assistant, or health educator. Although most clinical preventive services should be conducted during individual face-to-face office visits, some services may be conducted in groups, via the telephone, or by email communication.

Community-based preventive services (also known as population-based preventive services) include any kind of planned activity or group of activities (including programs, policies, and laws) designed to prevent disease or injury or promote health in a group of people (e.g., fluoridation of drinking water, bans on tobacco use in public places).³

Worksite-based preventive services are health promotion programs provided to employees and their dependents. The expressed purpose of these services is to improve employee health and prevent disease by providing an opportunity for employees to engage in primary prevention activities. Examples include:

- Employer-sponsored worksite fitness centers or healthy cafeteria programs that encourage healthy lifestyles.
- Employer-sponsored health risk appraisals (HRAs) that identify employees at risk for certain conditions and diseases (e.g., type 2 diabetes, heart disease, or hypertension) and refer those employees to their health plan for continuing care.
- Employer-sponsored services such as employee assistance programs (EAPs) that can help employees address health / lifestyle concerns, such as stress or substance use, before the problems escalate into a clinical disorder (e.g., substance abuse, depression).
- Employer-initiated worksite smoking bans.
- Employer-sponsored worksite influenza immunization clinics.

Preventive Interventions

There are several types of preventive interventions: screening, testing, counseling, immunization, preventive medication, and preventive treatment.

- **Screening** is best described as tests that assess the likelihood of the presence of a disease or condition in an apparently healthy individual. Screening methods include laboratory, X-ray, and similar technical methods; they also include questions asked by a clinician. Screening may be targeted to people at increased risk due to age, gender, family or personal history, or other factors. Each screening tool is different in design and method, affecting the sensitivity (ability to correctly identify those with the disease), specificity (ability to correctly identify those without the disease), and positive and negative predictive values of the tool. Ideally, screening tests are rapid, simple, and safe. It is important to note that, in most instances, screening is not a definitive diagnostic test and that a positive result on a screening test merely indicates that the screened individual has a higher likelihood of having the disease than a peer with a negative result. Individuals who screen positive on such tests should have confirmatory diagnostic tests to ensure an accurate diagnosis.⁴

- **Testing** refers to any process used to determine whether a condition is present (or not) or to assess the status of a condition. Testing may involve questioning patients (e.g., a mental status examination to determine whether thought processes are appropriate), physical examination (e.g., examining a heart to detect a murmur or performing a neurologic examination to detect nerve damage), or examining blood, body fluids, or tissues (e.g., to detect anemia, to monitor levels of blood sugar, or to see if a cancer is present in a biopsy sample). Testing may also require sophisticated technology, such as CT or MRI scans and other X-rays, or invasive procedures, such as heart catheterization to detect blockage of coronary arteries. Tests may be used to:
 - > Screen individuals who have risk factors, but no indication of having the condition;
 - > Diagnose individuals who have symptoms and signs of a condition but where a test will add certainty about the diagnosis; or
 - > Monitor the progress of an individual who is being treated or being considered for treatment, such as monitoring blood pressure over time.
- **Counseling** refers to a discussion between a clinician and patient about ways that changes in personal behavior can reduce risk of illness or injury. The goal of counseling is for clinicians to educate patients about their health risks as well as to provide them with the skills, motivation, and knowledge they need to address their risk behaviors (e.g., 5A framework for tobacco cessation: **A**sk, **A**dvice, **A**ssess, **A**ssist, **A**rrange). A special kind of counseling, “informed decision making,” recognizes that people make different decisions even though their situations may seem to be similar. Informed decision making is structured to give an individual all the information needed to choose among different clinical options, such as whether or not to undergo genetic testing.
- **Immunization** protects an individual from a specific communicable disease (e.g., measles) by exposing the individual to an antigen or a trace amount of inactivated disease-causing agent, spurring the development of natural immunity.
- **Preventive Medications** are used to prevent the onset of disease (e.g., aspirin therapy to prevent cardiovascular events).
- **Preventive Treatment** involves a procedure intended to prevent the occurrence of a disease or to prevent the progression of a disease from one stage to another. Preventive treatments usually refer to the use of prescription or over-the-counter (OTC) medications, but they may also involve prescriptions for lifestyle changes (e.g., exercise, diet change) or other interventions. Some surgical procedures may be considered “preventive treatment,” such as when polyps in the colon identified during a screening colonoscopy are removed in order to prevent their progression to cancer lesions.

In 2005, NCQA identified 44.5 million sick days due to suboptimal care for hypertension and diabetes, two preventable chronic diseases. The lost productivity associated with these disorders exceeded \$7 billion.⁶

The Importance of Preventing Chronic Disease

Chronic diseases result in a significant amount of preventable morbidity and mortality in the United States. In 2000, 46.7% of all deaths in the United States were caused by modifiable health behaviors (see Table 1.1).⁵ The U.S. Department of Health and Human Services estimates that approximately 33% of all deaths in the United

States are attributable to just three modifiable health behaviors: smoking, physical inactivity, and poor eating habits.²

Chronic diseases are the leading cause of direct healthcare costs. In fact, researchers estimate that 75% of all healthcare costs directly stem from preventable chronic health conditions such as type 2 diabetes, hypertension, and obesity.⁷⁻⁸ Chronic diseases are also a major cause of lost productivity and disability. For example:

- In 2002, the average annual healthcare cost for a person with diabetes was \$13,243 as opposed to \$2,560 for a person without diabetes.⁹
- It is estimated that the indirect cost of cardiovascular disease will total over \$145 billion in 2006.¹⁰
- Each year, an estimated 39 million work days are lost to obesity-related illnesses.¹¹
- In 1999, lost productivity due to smoking, and smoking-related illnesses cost employers \$1,897 per smoking employee.¹² Excess medical expenses due to smoking and smoking related illnesses cost employers \$1,850 per smoking employee (both figures adjusted to year 2002 dollars).¹²

Researchers estimate that 75% of all healthcare costs directly stem from preventable chronic health conditions, yet only 1% of the \$1.9 trillion dollars spent on health care in the United States is devoted to protecting health and preventing illness and injury.⁷⁻⁸

Each individual's health is shaped by many factors including medical care, social circumstances, and behavioral choices. Increasingly, there is clear evidence that the major chronic conditions that account for so much of the morbidity and mortality in the United States, and the enormous direct and indirect costs associated with them, in large part are preventable — and that to a considerable degree they stem from, and are exacerbated by, individual behaviors. As Americans see healthcare expenditures continue to increase, it is important to focus on strategies that reduce the prevalence and cost of preventable diseases.⁵

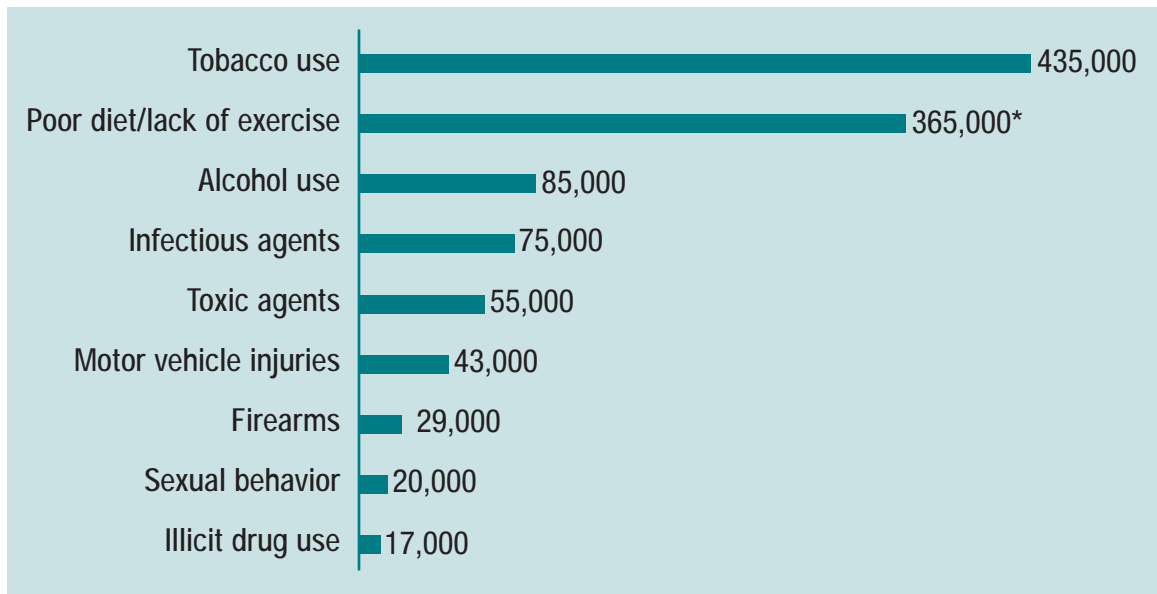
– U.S. Department of Health and Human Services, 2003
Prevention Makes Common "Cents"

Table 1.1: Percent of all Deaths in the United States Attributable to Selected Modifiable Health Behaviors, 1990-2000¹³

HEALTH BEHAVIOR	PERCENT OF DEATHS, 1990	PERCENT OF DEATHS, 2000
Tobacco use	19%	18.1%
Poor diet/physical inactivity	14%	15.2%*
Alcohol use	5%	3.5%
Infectious agents	4%	3.1%
Toxic agents	3%	2.3%
Motor vehicle injuries	1%	1.8%
Firearms	2%	1.2%
Sexual behavior	1%	0.8%
Illicit drug use	<1%	0.7%
TOTAL	50%	46.7%

Source: Mokdad A, Marks JS, Stroup DE, Gerberding JL. Actual causes of death in the United States. JAMA 2004; 291(10): 1238-1245. * Correction published: Mokdad A, Marks JS, Stroup DE, Gerberding JL. Correction: Actual causes of death in the United States 2000. JAMA 2005; 293(3): 293-294.

Figure 1.2: Underlying Causes of Death in the United States, 2000¹³



Source: Mokdad A, Marks JS, Stroup DE, Gerberding JL. Actual causes of death in the United States. JAMA 2004; 291(10): 1238-1245. * Correction published: Mokdad A, Marks JS, Stroup DE, Gerberding JL. Correction: Actual causes of death in the United States 2000. JAMA 2005; 293(3): 293-294.

The Value of Prevention

Purchasers can avoid or reduce the costs associated with preventable conditions by offering coverage for — and promoting the use of — clinical preventive services.

- Clinical preventive services can help individuals avoid disease altogether (e.g., tobacco use treatment).
- Clinical preventive services can also catch disease in its earliest stages (e.g., cervical cancer screening). Identifying patients with early stage disease allows clinicians to begin treatment sooner, when interventions are generally more effective and less expensive. Early detection and treatment of some important infectious diseases can also prevent spread of infection to others (e.g., influenza).
- Disease avoidance and early identification have financial benefits for employers including:
 - > Averted medical costs; and
 - > Reductions in absenteeism, lost productivity, turnover, and disability.

Research shows that employees who take advantage of preventive services have lower absenteeism, higher productivity, and a stronger commitment to their employer.¹⁴

Like any investment aimed at keeping a workforce healthy and productive, clinical preventive services offer value. The value of a preventive service is determined by its ability to prevent a significant amount of morbidity and mortality in relation to the cost of offering the service. Because offering a clinical preventive service has a real (monetary)

cost and an opportunity cost (there is a finite amount of services that can be delivered and received in a given period of time), it is important for purchasers to quantify the value of clinical preventive services in relation to one another when making coverage decisions.

The effectiveness of most clinical preventive services, particularly those considered evidence-based, is well-documented. The effectiveness of clinical preventive services recommended in the *Purchaser's Guide* is detailed in *Part III: Evidence-Statements for Recommended Clinical Preventive Service Benefits*. The cost-effectiveness (or economic value) of clinical preventive services is described below. More information on the economic value of preventive intervention can be found in each evidence-statement.

Examples of Avoided Costs

The average dollar spent on:

- Alcohol misuse screening and brief counseling interventions saves \$4 in healthcare costs.¹⁵⁻¹⁶
- The Hib vaccine (to prevent invasive bacterial infections) saves \$1.40 in direct medical costs and \$2.00 in indirect costs.¹⁷
- The hepatitis B vaccine saves 50 cents in direct medical costs and \$3.10 in indirect costs.¹⁷
- The varicella vaccine (to prevent chickenpox) saves 90 cents in direct medical costs and \$5.40 in indirect costs.¹⁷
- Chlamydia testing and treatment saves \$12 in complications arising from chlamydia.¹⁷

For more information on defining the value of preventive services and prioritizing services for inclusion in a medical benefit plan, please refer to *Part IV: The Prioritization and Strategic Implementation of Clinical Preventive Service Benefits*.

Cost-Saving Clinical Preventive Services

A health intervention is cost-saving when the intervention is 1) effective and 2) costs less in the long run than the cost of not intervening. For example, the cost of vaccinating all children in a given population against measles is less than the cost of treating the children who would contract measles without the population-wide protection of immunization.

Cost-Effective Clinical Preventive Services

A medical intervention is considered cost-effective when the intervention provides a health benefit at an acceptable cost. The term “acceptable cost” is not precisely defined and involves important ethical considerations such as the value of a life. The answer to this question boils down to a concept called “willingness-to-pay”: for example, how much is an individual, an employer, or a society willing to pay to extend the life of one individual for one year? Some conditions produce life- and work-altering disability, but not premature death. Economists can use willingness-to-pay methods to assess the cost-effectiveness of methods to prevent or modify disabilities as well. In the United States, there is no universally accepted answer to the “willingness-to-pay” question and, thus, no universally accepted threshold that distinguishes a cost-effective health intervention from an intervention that is not cost-effective.

In order to compare and rank various preventive interventions, economists use cost-effectiveness (CE) ratios. A CE ratio is calculated as the ratio of differences in costs and outcomes of the status quo and the proposed intervention according to the following formula:

$$\text{Cost-effectiveness ratio} = \frac{(\text{Cost with intervention} - \text{Cost without intervention})}{(\text{Outcome with intervention} - \text{Outcome without intervention})}$$

A CE ratio can be interpreted as the “price” of accepting a new intervention. The lower the price, the more cost-effective the new intervention.

Definition Box 1.3: Health Economics Terms

Health economists use several terms to explain the cost, benefit, and overall value of a clinical preventive service. The following terms are used throughout the *Purchaser’s Guide* to describe the economic benefits of clinical preventive services.

Cost-saving: The reduction in healthcare costs resulting from the intervention or program exceeds the money required to develop, implement, and maintain the respective intervention or program.

Cost-effective: The net cost per unit of health generated is favorable relative to other health services.

High-value: An intervention that prevents a substantial amount of morbidity and/or mortality and is cost-effective.

Quality Adjusted Life Years (QALY)

Outcomes in cost-effectiveness analysis (CEA) are usually measured in terms of number of life years saved as a result of implementation of a new intervention. For interventions with multiple health endpoints (e.g., hospitalization, treatment, death, etc) an outcome measure needs to combine information on both morbidity (a measure of clinical illness) and mortality (the number of deaths in the population under consideration). The best known of these is the quality-adjusted life year or QALY. In principle, QALYs are based on the preferences or “utilities” of respondents reflecting tradeoffs among different health states (e.g., total cure, partial cure, disability, death). A preference or utility weight or score of 1.0 represents perfect health and 0 represents death. The number of QALYs is calculated as the sum of the duration spent in each health state times the utility weight for that health state. For example, if the utility weight for a chronic condition is 0.6, and an individual remains in that health state for 1 year and then dies, the number of QALYs is 0.6. QALYs provide a common currency that permits comparisons among different people and across different kinds of conditions. QALYs permit comparisons of diseases that are rapidly fatal with those that do not produce death but instead produce years of severe disability.

The results of a CEA may be interpreted to determine whether an intervention yields good value for the investment. An intervention can be considered more or less cost-effective relative to either another intervention or to a benchmark value. Cost-effectiveness (CE) ratios are usually expressed in dollars per QALY. The lower the number, the more cost-effective the intervention.

It is commonly said that an intervention that costs more than \$50,000 or \$100,000 per QALY is not cost-effective, but a substantial number of healthcare interventions generally accepted in the United States have higher CE ratios.¹⁸ The use of a fixed cost-effectiveness threshold to define cost effectiveness ignores other determinants of social value such as perceptions of risk. Further, the Partnership for Prevention has estimated ranges of CE ratios using standardized methods for 25 clinical preventive services recommended for the general population by the U.S. Preventive Services Task Force (USPSTF).¹⁹ The investigators used a utility weight of 0.7 for chronic conditions, along with other simplifying assumptions that make the results difficult to compare with the published CE ratios from studies that are reported in the *Purchaser's Guide*. The investigators found that one-fifth of all recommended clinical preventive services had CE ratios between \$165,000 and \$450,000 per QALY in year 2000 dollars.

High-Value Clinical Preventive Services

Many preventive services are considered to be of high-value, meaning they are both cost-effective (they cost a “reasonable” amount of money for the added quality of life or life years gained) and prevent a substantial proportion of disease or injury when delivered appropriately. The National Commission on Prevention Priorities (NCPPI), a blue-ribbon panel of thought-leaders on prevention chaired by former Surgeon General Dr. David Satcher and staffed by Partnership for Prevention, recently ranked the health impact and cost-effectiveness of 25 preventive services recommended by the U.S. Preventive Services Task Force (USPSTF) and the Advisory Committee on Immunization Practices (ACIP). Please refer to *Part IV: The Prioritization of Clinical Preventive Services in a Strategic Implementation Plan* for more information.

Table 1.4: Cost-Effectiveness Gradient Based on Partnership for Prevention’s Ranking of Clinical Preventive Services Targeted to Working Age Adults¹⁹

HIGH-VALUE CLINICAL PREVENTIVE SERVICE	AS NOTED IN THE PURCHASER’S GUIDE	DESCRIPTION
CE RATIO < \$0/QALY (Defined as Cost-Saving)		
Aspirin Chemoprophylaxis	Aspirin Therapy for the Prevention of Cardiovascular Disease, <i>Counseling</i>	Discuss the benefits/harms of daily aspirin use for the prevention of cardiovascular events with men ≥ 40, women ≥ 50, and others at increased risk.
Tobacco Use Screening and Brief Intervention	Tobacco Use Treatment, <i>Screening, counseling, and treatment</i>	Screen adults for tobacco use, provide brief counseling, and offer pharmacotherapy.
\$0/QALY ≤ CE RATIO < \$14,000/QALY		
Colorectal Cancer Screening	Colorectal Cancer, <i>Screening</i>	Screen adults aged ≥ 50 years routinely with FOBT, sigmoidoscopy, or colonoscopy.
Influenza Immunization	Immunizations (Child, Adolescent, Adult)	Immunize adults aged ≥ 50 against influenza annually.
Problem Drinking Screening and Brief Counseling	Alcohol Misuse, <i>Screening and counseling</i>	Screen adults routinely to identify those whose alcohol use places them at increased risk and provide brief counseling with follow-up.
\$14,000/QALY ≤ CE RATIO < \$35,000/QALY		
Hypertension Screening	Hypertension, <i>Screening, counseling, and treatment</i>	Measure blood pressure routinely in all adults and treat with antihypertensive medication to prevent incidence of cardiovascular disease.
Cervical Cancer Screening	Cervical Cancer, <i>Screening</i>	Screen women who have been sexually active and have a cervix within 3 years of onset of sexual activity or age 21 routinely with cervical cytology (Pap smears).
Calcium Chemoprophylaxis	Not included in the <i>Purchaser’s Guide</i>	Counsel adolescent and adult women to use calcium supplements to prevent fractures.
\$35,000/QALY ≤ CE RATIO < \$165,000/QALY		
Cholesterol Screening	Lipid Disorders, <i>Screening, counseling, and treatment</i>	Routinely screen for lipid disorders among men aged ≥ 35 and women aged ≥ 45 and treat with lipid-lowering drugs to prevent the incidence of cardiovascular disease.
Breast Cancer Screening	Breast Cancer, <i>Screening</i>	Screen women aged ≥ 50 routinely with mammography alone or with clinical breast examination, and discuss screening with women aged 40 to 49 to choose an age to initiate screening.

Table 1.4: (Continued)

HIGH-VALUE CLINICAL PREVENTIVE SERVICE	AS NOTED IN THE PURCHASER'S GUIDE	DESCRIPTION
Obesity Screening	Obesity, <i>Screening, counseling, and treatment</i>	Screen all adult patients routinely for obesity and offer obese patients high-intensity counseling about diet, exercise, or both together with behavioral interventions for at least 1 year.
\$165,000/QALY ≤ CE RATIO < \$450,000/QALY		
Depression Screening	Depression, <i>Screening</i>	Screen adults for depression in clinical practices that have systems in place to assure accurate diagnosis, treatment, and follow-up.
Diabetes Screening	Diabetes (type 2), <i>Screening</i>	Screen for diabetes in adults with high cholesterol or hypertension, and treat with a goal of lowering levels below conventional target values.
Diet Counseling	Healthy Diet, <i>Counseling</i>	Offer intensive behavioral dietary counseling to adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease.
Tetanus-Diphtheria Booster	Immunizations (Child, Adolescent, Adult)	Immunize adults every 10 years.

Source: Maciosek MV, Coffield AB, et al. Priorities among effective clinical preventive services: results of a systematic review and analysis. *Am J Prev Med* 2006;31(1): 55-6.

Relevance to Business

While economic analyses of cost-effectiveness focus on the overall costs and benefits to society and the healthcare system, business case analyses of the value of clinical preventive services estimate the financial return-on-investment (ROI) to individual employers, healthcare plans, or providers. Those who pay for services are not necessarily the ones who obtain the full financial return, however. Interventions that are cost-effective or even cost-saving at the societal level do not necessarily yield a positive ROI from the business perspective, although they may provide a better value than other services.²⁰

The “Value of Prevention” in the Purchaser’s Guide

Each evidence-statement contains a “Value of Prevention” section that provides detailed information on the economic burden, including the workplace burden, of the condition/disease and information on the estimated cost of implementing the recommended preventive intervention. Select chapters also include information on the cost of treatment. A sample section is provided on the following page.

Obesity Sample

Value of Prevention	
Economic Burden of Condition/Disease	<p>Obesity contributes significantly to medical costs in the United States. In 1998, 9.1% of total annual medical expenditures could be attributed to obesity.²¹ Between 1987 and 2001, 27% of the growth in inflation-adjusted per-capita healthcare spending was associated with obesity.²² The annual cost of obesity is estimated to range from \$69 billion to \$117 billion (including \$61 billion for direct medical expenses and \$56 billion for indirect expenses such as lost productivity [in year 2000 dollars]).²³</p> <p>The expected lifetime costs of cardiovascular disease (including coronary heart disease, heart attack, and stroke) increase by 20% with mild obesity (class I: BMI of 30 to 34.9), 50% with moderate obesity (class II: BMI of 35 to 39.9), and nearly 200% with severe obesity (class III: BMI of 40 or higher).²⁴ One large health plan found that its yearly total medical claims were 18% higher for overweight individuals and 32% higher for obese than for healthy-weight individuals.²⁵</p> <p>A 2001 study found obese adults had, on average, about 37% higher healthcare expenses per person than normal-weight adults. This excess expense increased private healthcare spending by nearly 12% (more than \$36 billion).²²</p>
Workplace Burden of Condition/Disease	<p>The cost to employers of obesity-related health problems in 1994 was estimated to be \$13 billion per year, including \$8 billion in medical claims, \$2.4 billion in paid sick leave, \$1.8 billion in life insurance, and almost \$1 billion in disability insurance.²⁴</p> <p>Obesity and related illnesses are also a major cause of disability. Each year, an estimated 39 million work days are lost to obesity-related illnesses.²²</p>
Economic Benefit of Preventive Intervention	<p>Nutrition education, diet, and exercise counseling are effective interventions for obesity prevention and have the potential to significantly reduce the direct and indirect costs of obesity-related illnesses. Researchers have estimated that even a modest reduction of 10% in body weight in an obese individual might reduce the expected lifetime healthcare costs of major obesity-related diseases for the individual by \$2,200 to \$5,300, depending on age, sex, and initial BMI.²⁶</p>
Estimated Cost of Preventive Intervention	<p>The cost of BMI screening is negligible when height and weight measurements are already recorded as part of a routine physical exam. In 2004, the private-sector cost of obesity counseling averaged \$39 per session; approximately 95% of all paid claims fell within the range of \$0 to \$129 per session.²⁷</p>
Estimated Cost of Treatment	<p>In the United States, the costs associated with treating obesity vary by location, provider type, and treatment modality. For example, in 2006 the average wholesale price of a 1-month supply of pharmacological therapy for obesity was \$207.04 for orlistat (Xenical[®]) (120 mg three times daily) and \$423.60 for a 3-month supply of sibutramine (Meridia[®]) (15 mg daily).²⁸ In contrast, the average price of a surgical procedure for obesity in 2004 ranged from \$20,000 to \$35,000.²⁹</p>

Promoting Effective and Appropriate Clinical Preventive Services

The Underutilization of Preventive Care

Despite the documented benefits of timely preventive care, in 2002, only half of insured adults (52%) received preventive care and screening tests according to guidelines for their age and sex.³⁰ The underutilization of clinical preventive services has a negative impact on beneficiaries' health status and on employers' overall healthcare costs. For example, in 2004 the National Committee for Quality Assurance (NCQA) identified 7,600 excess cases of late-stage breast cancer, 20,000 excess cases of late-stage colorectal cancer, and 21,000 excess osteoporosis-related fractures that could have been averted if individuals received appropriate and timely preventive care.⁶ Had these conditions been effectively prevented, \$485.2 million in excess medical expenses could have been avoided.⁶

Reasons for the underutilization of preventive care are complex. In the past, preventive services were poorly covered by health insurance policies in comparison to care for acute services and medications. Differential coverage created perceived and real access barriers for beneficiaries. Other barriers to preventive care include patient and provider attitudes about

A recent study conducted by Milliman, C-Change, and the American Cancer Society, found that 3 to 5 lives (per 50,000 employees) could be saved each year if employers fully adopted select USPSTF cancer screening and tobacco treatment recommendations.³¹ The cost to employers of achieving 100% compliance with USPSTF guidelines for tobacco use treatment as well as breast, cervical, and colorectal cancer was estimated to be \$7.50 per member/per month (PMPM). Because most employers already provide some type of cancer prevention and early detection benefit, the average incremental cost of moving to 100% compliance would equal just \$2.95 PMPM.³¹

the value of prevention and the healthcare system's lack of capacity to effectively track, promote, and deliver clinical preventive services. Even today, too little time and too few resources are devoted to prevention. In order to increase the utilization of clinical preventive services, all stakeholders will need to increase their investments in prevention.

Emphasizing Effective and Appropriate Clinical Preventive Services

Not only is the underutilization of effective preventive services a concern to employers, but so too is the overutilization of ineffective or unproven clinical preventive services. Providers and patients have a limited amount of time and purchasers have a limited amount of money to spend on healthcare interventions. It is therefore imperative for purchasers to cover and promote high-impact clinical preventive services that have proven benefit. Employers expanding their medical benefit plan to include preventive services

should be careful to first select services with strong evidence of effectiveness. For more information on effective clinical preventive services and the prioritization of clinical preventive service benefits, please refer to *Part IV: The Prioritization and Strategic Implementation of Clinical Preventive Service Benefits*.

Employer Action Steps

Employers can reduce their total healthcare costs and improve the health of their beneficiaries through the implementation and promotion of clinical preventive service benefits. For this purpose, employers should:

- Offer a structured set of clinical preventive service benefits through their health plan(s).
- Inform employees, dependents, and retirees about the availability of clinical preventive service benefits and promote the consistent and appropriate use of recommended clinical preventive services.
- Educate employees, dependents, and retirees about the importance of preventive services and healthy lifestyles.
- Implement programs that promote healthy lifestyles and provide opportunities for employees to engage in disease prevention and health promotion outside of the clinical setting (e.g., health promotion or wellness programs, disease prevention programs, employee assistance programs).
- Support community-based and worksite-based preventive service interventions.

For more information on promoting the delivery and use of clinical preventive services, please refer to *Part VI: Leveraging Benefits: Opportunities to Promote the Delivery and Use of Preventive Services*.

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