CHAPTER

12

HEALTH PROMOTION AND DISEASE PREVENTION

Introduction

A major goal of a health services system is to protect, maintain, and restore the health of individuals and the population at large. Health promotion, health protection, and disease prevention activities provide three ways to accomplish this goal. This chapter focuses on these, emphasizing the National Health Promotion and Disease Protection Objectives issued by the U.S. Department of Health and Human Services (HHS) in 2000 in the *Healthy People 2010* report. *Healthy People 2010* defines two major goals for the health of the people in the United States: (1) to increase the quality and years of healthy life and (2) to eliminate health disparities (USDHHS 2000a). Periodic assessment of 467 objectives developed for 28 focus areas monitors progress in achieving the two goals. Exhibit 12.1 lists the 28 focus areas. *Healthy People 2020* is currently under development, led by the Centers for Disease Control and Prevention and involving other public health partners. It will build on a mid-course review of the accomplishments of *Healthy People 2010*.

First, the areas of health promotion, health protection, and disease prevention are defined, followed by a discussion of those who provide the services and how patients access and use them. The chapter concludes with a review of policy issues for each area.

Health Promotion

Achieving optimal health status is the common goal of health promotion, health protection, and disease prevention activities. Each activity, however, has a separate emphasis to reach this goal. A definition of health promotion and the availability of health promotion services are reviewed in the sections that follow.

What Is Health Promotion?

Ideally, the promotion of good health practices to preserve and enhance health status is the circumstance under which individuals have their initial contact with a health services system. The U.S. health services system, with its emphasis on

EXHIBIT 12.1
Healthy People 2010 Focus Areas

1. Access to quality health services
2. Arthritis, osteoporosis, and chronic back conditions
3. Cancer
4. Chronic kidney disease
5. Diabetes
6. Disability and secondary conditions
7. Educational and community-based programs
8. Environmental health
9. Family planning
10. Food safety
11. Health communication
12. Heart disease and stroke
13. HIV
14. Immunization and infectious diseases
15. Injury and violence prevention
16. Maternal, infant, and child health
17. Medical product safety
18. Mental health and mental disorders
19. Nutrition and overweight
20. Occupational safety and health
21. Oral health
22. Physical activity and fitness
23. Public health infrastructure
24. Respiratory diseases
25. Sexually transmitted diseases
26. Substance abuse
27. Tobacco use
28. Vision and hearing

SOURCE: Data for this exhibit came from *Healthy People 2010: National Health Promotion and Disease Prevention Objectives*, published by the U.S. Department of Health and Human Services in 2000.

curative medicine and crisis intervention, is sometimes faulted for the limited resources it directs to health promotion, health protection, and disease prevention activities, despite the proven cost-effectiveness of select interventions.

The focus of most health promotion strategies is on individual lifestyle —personal choices made in a social context. These choices affect a person's health status. Several of the *Healthy People 2010* focus areas incorporate measurable objectives in health promotion areas, including:

- physical activity and fitness;
- nutrition and overweight;
- tobacco use;
- substance abuse;
- family planning;

- mental health and mental disorders;
- injury and violence prevention; and
- educational and community-based programs (USDHHS 2000a).

Availability and Utilization of Health Promotion Services

Although health promotion activities are important to positive health status, the U.S. health services system is not organized to systematically and comprehensively offer them or encourage their use. One reason for this gap is the traditional separation of physical health care from behavioral health care. Mental health care, substance abuse treatment, and the recognition and treatment of violent and abusive behaviors are all too frequently segregated from somatic health care, resulting in a fragmented system that may fail to holistically treat an individual's needs.

The availability of health promotion activities, because they center on a person's lifestyle choices, may depend on a person's self-awareness and aggressiveness in seeking the activities. Health services providers, including health educators, play important roles in creating awareness of the need for health promotion and developing strategies with individual patients to increase their participation in health promotion activities. For example, a study by Fleming and colleagues (1997) shows that a physician who discusses potentially problematic alcohol consumption with a patient can influence that patient to reduce alcohol intake.

The most effective interventions available to clinicians for reducing the incidence and severity of the leading causes of diseases and disabilities in the United States are those that address the personal health practices of patients, according to the U.S. Preventive Services Task Force. The HHS convened the Preventive Services Task Force in the mid-1980s to determine the extent to which providers use preventive services and to assess the effectiveness of a range of available interventions. The resulting first edition of the *Guide to Clinical Preventive Services* assessed the effectiveness of 169 strategies for preventing 60 target conditions (Fisher 1989). The second edition, issued in 1996, reviewed evidence regarding new topics that were added in subsequent years on the basis of the extent to which they satisfied two criteria: (1) the burden of suffering from the target condition and (2) the potential effectiveness of the preventive intervention (Diguiseppi, Atkins, and Woolf 1996).

The area of clinical preventive services deserves additional focus at this point because it denotes a consensus among the provider community about effective preventive services. Recognizing that appropriate preventive services can reduce morbidity and mortality from disease and thus potentially reduce expenditures, the U.S. Preventive Services Task Force analyzed three categories of preventive services: screening, counseling, and immunization/chemoprophylaxis (see Exhibit 12.2). The task force report is important for

EXHIBIT 12.2
Effective Clinical Preventive Services

Vascular Diseases
Asymptomatic coronary artery disease
High blood cholesterol
Hypertension
Peripheral arterial diseases

Neoplastic Diseases
Breast cancer
Colorectal cancer
Cervical cancer
Prostate cancer
Lung cancer
Skin cancer
Testicular cancer
Ovarian cancer
Pancreatic cancer
Oral cancer

Metabolic Diseases
Diabetes mellitus
Thyroid disease
Obesity
Phenylketonuria

Hematologic Disorders
Anemia
Hemoglobinopathies
Lead toxicity

Ophthalmologic and Ontologic Disorders
Diminished visual acuity
Glaucoma
Hearing impairment

Infectious Diseases
Hepatitis B
Tuberculosis
Syphilis
Gonorrhea
Infection with HIV
Chlamydial infection
Genital herpes simplex
Asymptomatic bacteriuria, hematuria, and proteinuria

Prenatal Disorders
Intrauterine growth retardation
Preeclampsia
Rubella
Rh factor compatibility
Congenital birth defects
Fetal distress

Musculoskeletal Disorders
Postmenopausal osteoporosis
Risk of low back injury

Mental Disorders/Substance Abuse
Dementia
Abnormal bereavement
Depression
Suicidal intent
Violent injuries
Alcohol and other drug abuse

Prevention of tobacco abuse
Exercise counseling
Nutritional counseling
Prevention of motor vehicle injuries
Prevention of household and environmental injuries
Prevention of HIV infection and other STDs
Prevention of unintended pregnancy
Prevention of dental disease

Childhood immunizations
Adult immunizations
Postexposure prophylaxis
Estrogen prophylaxis
Aspirin prophylaxis

SOURCE: Information for this exhibit came from *Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions*, by M. Fisher, published in 1989 by Williams & Wilkins. Used with permission.

the guidance it offers providers and for its analytic methodology, which can be used to assess diagnostic, treatment, and preventive interventions.

Providers, however, may not always offer these services or may encourage their patients to obtain them elsewhere. The Preventive Services Task Force identified several reasons physicians fail to provide health promotion and disease prevention services:

- Preventive services are poorly reimbursed or not reimbursed at all.
- A patient care visit is generally limited to resolving the presenting problem, and little time is allotted for discussing health-related behaviors or counseling.
- Physicians and other providers may be uncertain about which services should be offered under what circumstances.
- Providers may be skeptical about the effectiveness of some health promotion and disease prevention interventions.

In addition to health services providers, other resources support health promotion. Larger businesses may sponsor on-site fitness centers for their employees or subsidize employee participation in athletic activities and programs. Employee assistance programs may be available to support smoking-cessation programs and to provide confidential access to substance abuse treatment or mental health services. Planned Parenthood organizations and local health departments help people with family planning. Employees insured through managed care programs such as health maintenance organizations may have access to wellness centers that counsel them in such areas as improving nutrition, assessing body mass index, and developing individualized diet and exercise programs, or that provide substance abuse treatment and smoking-cessation programs.

Health Protection

Unlike health promotion, which focuses on individual lifestyle issues, health protection emphasizes the health of a population. The following section defines health protection and describes the availability and utilization of health protection services.

What Is Health Protection?

The major health protection focus areas identified in *Healthy People 2010* include occupational safety and health, environmental health, food safety, and oral health (USDHHS 2000a).

Availability and Utilization of Health Protection Services

Primary responsibility for all the health protection objectives resides with the public health sector, although individuals and health services providers also have responsibilities in this area. Federal, state, and local departments of public health, labor, transportation, and others oversee the maintenance of safe living and working environments, including pure water, clean air, safe food and drug products, appropriate waste disposal, elimination of hazardous situations, and reduced risk of automobile accidents. Health educators play the important role of informing the public about how to achieve and maintain safe living and working environments and how to engage in health protective behaviors.

Disease Prevention: Primary, Secondary, and Tertiary

Three levels of disease prevention—primary, secondary, and tertiary—are identified in a comprehensive health services system.

What Is Primary Disease Prevention?

Primary disease prevention focuses on preventing agents from causing disease or injury. Primary preventive measures are directed toward persons who are entirely asymptomatic (i.e., no indication of disease is present). Immunizations are a primary prevention strategy for preventing disease from certain viruses, such as influenza, measles, polio, and chicken pox.

What Is Secondary Disease Prevention?

Secondary disease prevention—the early detection and treatment to cure or control the cause of a disease—is also aimed at asymptomatic persons who have already developed risk factors or preclinical disease but in whom the disease itself has not become clinically apparent (Fisher 1989). A Pap smear to detect cervical dysplasia before the development of a cancer is a secondary prevention strategy.

What Is Tertiary Disease Prevention?

Tertiary disease prevention ameliorates the seriousness of a diagnosed disease by decreasing the resulting disability and dependence. Antibiotic therapy to prevent postoperative wound infection, insulin therapy to prevent the complications of diabetes mellitus, or the use of protease inhibitors to stem the advances of the human immunodeficiency virus (HIV) are examples of tertiary prevention strategies.

Focus Areas of Preventive Services

Healthy People 2010 (USDHHS 2000a) identifies the following focus areas of preventive services:

- arthritis, osteoporosis, and chronic back conditions;
- cancer;
- chronic kidney disease;
- diabetes;
- disability and secondary conditions;
- heart disease and stroke;
- HIV;
- immunizations and infectious diseases;
- maternal, infant, and child health;
- sexually transmitted diseases; and
- vision and hearing.

Availability and Utilization of Health Preventive Services

Preventive services are offered by primary care and specialist physicians, nurse practitioners, physician assistants, nurses, and dentists. At least four of these services—maternal, infant, and child health; HIV; sexually transmitted diseases; and immunization and infectious diseases—are likely to be available through local departments of public health, in community and neighborhood health center clinics, and from other providers of public health services. The Center for Studying Health System Change (Draper, Hurley, and Lauer 2008) reports that employers who provide health insurance are especially interested in shifting the focus of their health plans from managing illness to promoting health.

Skepticism About the Cost-Effectiveness of Preventive Services

Providers may question the cost-effectiveness of preventive services or interventions because their results may not be demonstrable or evident until long after a patient has left the provider's care. Russell (2008) examined a range of studies on the cost-effectiveness of such preventive interventions as vaccines, preventive medications, screening to detect disease early, and lifestyle changes. She concluded that the evidence from cost-effectiveness studies suggests that investing in prevention may be a good idea, but it will not remove the need to make choices about priorities.

Health Promotion, Health Protection, and Disease Prevention Issues in the U.S. Health Services System

Reorienting the focus from the negative, or disease control, sense of health to a positive focus on health promotion, health protection, and disease prevention remains a challenge in the U.S. system. Issues relating to such a reorientation include applying existing knowledge, assigning the level of responsibility for change, and addressing system issues.

Applying Existing Knowledge

Although much remains to be learned about how health status relates to individual lifestyle choices and the context in which choices are made, enough solid evidence of the effects of some choices is readily available to warrant prompt and effective action at both the individual and societal level. For example, despite tobacco company protestations to the contrary, evidence about the negative consequences of tobacco use is sufficient to support decisive individual and societal action to curb tobacco use. Evidence about the importance of good nutrition, physical activity, obesity avoidance, and other health-promoting behaviors is also compelling. The issue is not how to obtain additional information but how to effectively apply existing knowledge to achieve behavioral change.

Assigning Responsibility for Health Promotion, Health Protection, and Disease Prevention

Part of the dilemma in effectively applying existing knowledge regarding health promotion, health protection, and disease prevention is the unclear line of responsibility for these functions (i.e., are they the responsibility of the individual, the health services provider, or society?). The absence of a clear line of responsibility enables each party to easily assume that others are doing what should be done.

Assuming that individuals must be most responsible for their personal health status is easy. However, what about individuals' competency and self-efficacy, and the social context in which they make decisions? Breslow (1990) points out that, for the most part, people use cocaine when it is socially available and when their peers are using it. Asserting that the user has "free choice" may obscure the reality. The argument for individual responsibility, when carried to its extreme, may result in blaming the victim and lead to proposals to hold the victim accountable for self-inflicted physical deterioration. Although clearly more easy to prescribe than to implement, a recognition of shared responsibility for health promotion, health protection, and disease prevention, and for the development of effective strategies to improve health status, would markedly improve the U.S. health services system.

Addressing System Issues

In addition to examining and addressing shared responsibility to improve health promotion, health protection, and disease prevention, other changes in the U.S. health services system are influencing the focus on these three areas. These changes include:

- an epidemiologic transition;
- a shift from disease control by specialists to a concentrated focus on health by primary care providers;
- technologic advances;
- the changing influence of managed care;
- the continued debate about whether interventions should be aimed at the individual or at the community; and
- insurance coverage for preventive services.

Epidemiologic Transition

Breslow (1990) notes the epidemiologic transition, a concept coined by Omran (1971) and developed by Olshansky and Ault (1986), as part of the recent evolution of health. The epidemiologic transition means that attention on the diagnosis and treatment of disease has transferred from the realm of contagious and communicable diseases—many of which can now be controlled and some of which are close to eradication—to the epidemic diseases (coronary disease, lung cancer, and other noncommunicable diseases) generated by twenty-first century patterns of living.

Reorientation Toward Primary Care

As one of the most technologically advanced in the world, the U.S. health services system is renowned for its abilities to detect and treat disease. This reputation is reflected in the composition of the physician workforce, where specialists outnumber generalists by a ratio of two to one, and in the reimbursement system, where specialists have traditionally outearned generalists. Results of this emphasis include the provision of high-cost, expenditure-increasing care and potential limitations in accessing primary care.

Several stimuli are effecting a reorientation toward primary care. First, managed care created a demand for more generalists to serve as patients' first point of contact with their health plan and to control referrals to specialists. This demand served to decrease the salary differential between the two categories of physicians. Second, some medical schools, sensitive to producing an employable workforce, created or renewed a curricular emphasis on primary care in the mid-1990s. It is not yet clear how many of those changes remain in effect, but anecdotal reports suggest that this idea did not prevail. Many medical students were not and are not interested in careers in primary care. Third, congressional action on the Medicare program, the predominant support of graduate medical education for both generalist and specialist physicians,

is reinforcing this shift through proposals to fund fewer specialty training slots. The 1997 Balanced Budget Act limited the number of residency slots for which the Medicare program would reimburse an academic health center, a teaching hospital, or another training site.

Technologic Advances

Basic scientific research regularly produces results that help to promote and protect health and, in particular, to prevent disease. Unraveling the DNA mysteries, from which is learned the origins and progression of diseases, promises advances on a number of medical fronts. Mapping the human genome and discovering more about the genetic influences on health status are other important advances.

Managed Care

A major premise of managed care is that health promotion, health protection, and disease prevention, if properly instituted, improve a person's immediate health status and quality of life and avert more serious—and more costly—health problems later in life. Certain forms of managed care provide financial incentives to keep subscribers as healthy—and out of the hospital—as possible, which means regular monitoring of individual health status.

Supporting health promotion, health protection, and disease prevention may have immediate payoffs for the individual and the managed care organization; however, the most significant returns for the use of these strategies may not be realized until later in life, when the subscriber may have disenrolled and entered a competitor's health plan. The extent and duration of health promotion, health protection, and preventive services vary greatly by type of managed care plan and are areas in need of additional research and analysis.

Level of Intervention

Whether intervention to promote and protect health and to prevent disease should be aimed at individuals, the community, or a combination of the two remains unresolved. Breslow (1990) calls attention to a subtle distinction that has occurred over time in defining, and thus attacking, a health problem. In earlier times, exposure to hazardous agents, such as contaminated water, constituted the health problem, and the focus of intervention was at the community level. Individual choices about food, exercise, tobacco use, and safe motor vehicle operation suggest that successful interventions for today's health problems should be aimed at the individual. Such choices, however, are made within a social context that often defines access, suggesting that more interventions should involve the community.

Insurance Coverage for Preventive Services

Insurers may vary in their coverage of behavioral health and preventive services. Generous health insurance benefit packages may cover weight-loss programs, smoking-cessation assistance, alcohol and substance abuse treatment, and a full range of mental health services. More basic benefit packages, how-

ever, may cover few, if any, of these services. Parts of the population most in need of behavioral health and other preventive services may have limited or no access to them, either because they are uninsured or because their benefit package does not adequately cover these services. Even when an insurer covers these services, studies have shown that the availability of services does not ensure their utilization. To enhance patient benefit from preventive services, an organized approach to patient follow-up is essential (Morrissey et al. 1995).

Summary

Patients, providers, payers, and politicians are turning up the volume on their demands for greater emphasis on health promotion, health protection, and disease prevention in the U.S. health services system. The motivations for these demands include improved quality of life, the desire to positively influence health rather than always intervene in crisis mode, a healthier and more productive workforce, and the need to contain and reduce expenditures for health services. Health promotion, health protection, and disease prevention can be effective in helping to meet these various demands. They cannot, however, eliminate disease and the need for diagnosis, treatment, and rehabilitation in the U.S. health services system.

Key Words

Balanced Budget Act of 1997
behavioral health
blaming the victim
disease prevention
employee assistance program
epidemiologic transition
Guide to Clinical Preventive Services
health maintenance organization
health promotion
Healthy People 2010 *objectives*
human genome research
managed care
Planned Parenthood
primary disease prevention
secondary disease prevention
tertiary disease prevention
U.S. Preventive Services Task Force