JOINT REPORT OF COUNCIL ON MEDICAL SERVICE AND COUNCIL ON SCIENCE AND PUBLIC HEALTH

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REWARD-BASED INCENTIVE PROGRAMS FOR HEALTHY LIFESTYLES

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS AND REMAINDER OF REPORT FILED

Health care expenditures continue to increase and chronic diseases continue to impose an increasing burden on the American health care system. Recently, considerable attention has been focused on the obesity epidemic in this country, but the burdens of coronary artery disease, stroke, cancer, diabetes, chronic obstructive pulmonary disease, and the morbidity/mortality associated with alcohol, tobacco, and other substance abuse continue to exact a tremendous human and economic toll. In addition to genetic variables, environmental, cultural, and lifestyle factors influence the development of chronic disease. Lifestyle factors that increase the risk of chronic disease (i.e., diet, nutrition, alcohol and tobacco use, physical inactivity, body weight) are potentially modifiable. Many of these risk factors cross disease boundaries, influencing more than one of the major causes of morbidity and mortality. Many of these diseases or conditions influence the development or progression of others (e.g., obesity increases the risk of heart disease and diabetes).

Increasingly, in an effort to address the burden of chronic disease, employers and third-party payers, including state Medicaid systems, have begun developing and offering various incentives to encourage consumer adoption of healthier lifestyles. A series of discussions and meetings between the Council on Medical Service and the Council on Science and Public Health led to the development of this report, which highlights some programs that have been developed that offer incentives to encourage individuals to adopt and maintain healthy behaviors.

This report briefly evaluates the impact of key risk factors for chronic disease; describes elements of successful behavior modification programs; provides examples of employer-sponsored, government-sponsored, and health plan incentive programs; summarizes relevant AMA policy; and offers a set of guiding principles that could serve as a framework in developing reward-based incentive programs designed to promote healthy lifestyles.

BACKGROUND

Health behaviors and modifiable risk factors have significant and direct effects on health outcomes. Up to 70% of the nation's premature deaths are linked with unhealthy diet, overweight and obesity, physical inactivity, and tobacco and alcohol use. The major causes of mortality in the United States remain heart disease, cancer, stroke, chronic lower respiratory disease, and diabetes, with much higher rates for African Americans (National Vital Statistics Report, 2005). Providing incentives to modify unhealthy behaviors, therefore, is a potentially valuable approach to improving the health status of the nation.

Each year in the United States, approximately 440,000 persons die of a cigarette smoking-attributable illness, resulting in 5.6 million years of potential life lost, $75 billion in direct medical costs, and $82 billion in lost productivity (U.S. Department of Health and Human Services, 2003). An estimated 8.6 million persons in this country have serious illnesses attributed to smoking. Lung cancer remains the most common cancer-related death by far among both men (31%) and women (27%) (American Cancer Society, 2005); smoking also is a risk factor for several other cancers. Chronic bronchitis and emphysema account for more than half of all smoking-attributable diseases, and chronic lower respiratory tract disease is the fourth leading cause of death in the United States (NVSR, 2005). These findings underscore the need to expand surveillance of the disease burden caused by smoking and to establish comprehensive tobacco-use prevention and cessation efforts to reduce the adverse health impact of smoking. Even with decreases in cigarette smoking since the Surgeon General's Report in 1964, 25% of men and 20% of women are current smokers.

Among current drinkers aged 18 years and older, 40% of men and 20% of women report binge drinking (i.e., five alcoholic drinks on a single occasion) in the past year (National Center for Health Statistics, 2005). Nearly 1 in 10 American adults is a heavy drinker and meets the diagnostic criteria for alcohol use disorders (NCHS, 2005).

Chronic, excessive use of alcohol is a risk factor for hypertension, hyperlipidemia, cardiomyopathy, stroke, liver disease, and cancers affecting the oral cavity, esophagus, stomach, and pancreas. Alcohol use disorders are independently associated with other comorbidities, including mood and anxiety disorders.

Overweight and obesity and physical inactivity among both adults and children are risk factors for several chronic diseases. Their presence raises the risk of heart disease, some cancers, diabetes, and arthritis. In addition, being overweight often raises blood pressure and cholesterol, which in turn increase the risk of heart disease. More importantly, the prevalence of overweight, obesity, and physical inactivity has not shown improvement, and in fact has increased substantially over the last 30 years among all demographic sets. Between 1976-1980 and 1999-2002, the prevalence of overweight among children 6 to 11 years of age more than doubled from 7% to 16%, and the prevalence of overweight among adolescents 12 to 19 years of age more than tripled from 5% to 16% (NCHS, 2005). In 2003, only one-third of adults 18 years of age and older engaged in regular leisure-time physical activity. The rising prevalence of overweight in children and adolescents, and the high percentage of both adults and adolescents not engaging in regular physical activity, raise additional concerns for future health outcomes.

Diabetes, which is also associated with obesity, rises sharply with age and is more common among non-Hispanic black and Mexican-American persons than whites. The annual cost of diabetes in medical expenditures and lost productivity rose from $98 billion in 1997 to $132 billion in 2002 (Hogan P et al, 2002). Nearly 21 million people in the United States (approximately 7% of the population) have diabetes (American Diabetes Association, 2006). Diabetes is the sixth leading cause of death, but is likely to be underreported. Major complications of diabetes include heart disease and stroke, high blood pressure, blindness, amputation, kidney disease, peripheral vascular disease and neuropathy, and periodontal disease.

Cardiovascular disease (CVD) (i.e., heart disease and stroke) remains the number one killer of men and women in this country (NVSR, 2005). Cardiovascular disease accounts for about 38% of all U.S. deaths. More than 150,000 Americans under age 65 die each year from CVD. Major risk factors for the development of CVD are high blood cholesterol, high blood pressure, tobacco use, physical inactivity, overweight and obesity, diabetes mellitus, and excessive alcohol consumption (American Heart Association, 2005). In 2005, the estimated direct and indirect cost of CVD was more than $390 billion dollars.

CHANGING BEHAVIOR

In this report, the Councils have chosen to focus on how reward-based incentives can be used to effect behavior change and accomplish risk reduction for chronic disease. A related but secondary element is behavior change to improve chronic disease management. Programs that are more likely to change individual health behaviors incorporate a multifaceted approach to help people adapt, change, and maintain behavior. Several conceptual models are available to guide the development, implementation, and evaluation of health-related behavior change interventions (e.g., learning and conditioning, cognitive social learning, health beliefs, reasoned action, stages of change model, social action theory) (Institute of Medicine, 2001).

Substantial empirical evidence suggests that “self-efficacy” beliefs are reliable predictors of behavior, and that they mediate the effects of intervention on behavior change, including a number of health related behaviors. The perception of personal risk for developing a particular condition, and the degree to which the person attributes negative medical consequences to a particular behavior or condition, provides motivation for reducing or eliminating unhealthy behaviors.

The “stages of change model” characterizes the continuum of steps that people take toward change (i.e., precontemplation; contemplation, preparation, action, maintenance, and relapse). It also includes the activities or processes to move people from one stage to another. Most people are in the “precontemplation” or “contemplation” stage; thus, approaches that substantially increase motivation for behavior change are extremely valuable. Furthermore, a person’s capacity (for example) to practice healthy eating habits or to exercise regularly is influenced by ready access to health-enhancing foods and safe, accessible places to exercise. Thus, incentive programs that facilitate access to vehicles of change are more likely to be successful. Similarly, the intensity of the behavior change service and its integration into the care delivery system affect the likelihood of success. In this regard, a continuing and major barrier to effective health care system intervention is the lack of adequate payment for counseling and other behavior modification techniques.

EMPLOYER-SPONSORED PROGRAMS

Worksite Health Promotion

Health risks, particularly obesity, stress, and general lifestyle, are significant predictors of health care costs and utilization in adults (Tucker and Clegg, 2002). Modifiable risk factors contribute substantially to overall health care expenditures (Anderson, Whitmer, Goetzel et al, 2000). Beginning in the 1980s, many employers began designing and offering health promotion activities on site to reduce chronic disease and disability among their employees (IOM, 2001). Studies have demonstrated significant improvements in the level of blood pressure control among hypertensive employees (as well as overall cost savings) by providing treatment and/or follow-up monitoring and counseling services at the work site (Foote and Erfurt, 1991). Short-term increases in physical activity and fitness levels, reductions in smoking and total serum cholesterol levels, and weight loss also have been achieved through worksite programs. Johnson & Johnson's Health & Wellness Program resulted in a significant reduction in medical care expenditures (~$225/employee/year) over a 4-year period. This program incorporated health screens, lifestyle improvement programs, and worksite changes to support healthier lifestyles (Ozminkowski, Ling, Goetzel et al, 2002). A systematic review of corporate health promotion programs found that such programs are generally associated with lower levels of absenteeism and health care costs, and fitness programs are associated with reduced health care costs (Aldana, 2001). Programs incorporating financial incentives have been developed most recently (see below). The limited evidence to date suggests that the incorporation of financial incentives increases participation in wellness-type programs and generates short-term benefits (Stein, Shakour, Zuidema, 2000).

Employer-Sponsored Incentive Programs

According to Hewitt Associates, about 41% of companies offer incentives designed to promote healthy behavior among their employees. These incentives range from distributing educational materials and hosting health fairs, to more personalized and consistent programs such as completion of health assessments and participation in individualized health management programs.

Gordian Health Solutions, Inc, a population health management company, works with employers and insurance companies to develop incentive-based programs that encourage participation in health and lifestyle management programs. According to Gordian's estimates, between 14% and 20% of employees will participate in lifestyle improvement programs without any incentive (i.e., reward); about 40% will participate with some incentive (e.g., one-time cash payment for completing health assessment); and between 50% and 60% will participate if incentives are formally integrated into employee benefits (e.g., tied to the insurance premium structure) (*www.gordian-health.com*).

Increasing numbers of small and large employers are pursuing reward-based strategies to improve the overall health of their workforce and keep health care costs down. Two employers that are experimenting with comprehensive lifestyle incentive programs are King County, Washington, and Worthington Industries, in Ohio. In 2006, King County, which is self-insured, began offering its employees the opportunity to participate in its Healthy Incentives Program, the goal of which is to encourage individuals to "adopt healthy behavior and save costs." To maintain confidentiality, a third party administers the Healthy Incentives Program.

Under the design of the program, all employees will continue to have a choice between two health plans, and will have access to the same covered services, but deductibles and co-payments/co-insurance applicable under each plan will vary based on an individual's participation in the program. Participation includes completion of a confidential annual wellness assessment, and regular participation in follow-up activities or behaviors, such as increasing exercise levels, making dietary changes, or participating in a disease management program. There are three different levels of participation, which correspond to higher or lower out-of-pocket expense levels, and all covered adults (i.e., the employee and his or her covered spouse) must participate in order to quality for the out-of-pocket reductions. The program emphasizes participation, rather than present health status, to ensure minimal distinctions between individuals with varying health conditions.

King County's Healthy Incentives Program is a three-year pilot project, which will be evaluated in 2009 based on how well it is achieving its goals of saving money and offering opportunities for improved healthy behaviors and outcomes for employees. According to King County Executive Ron Sims, the goal of the Healthy Incentives Program is to save $40 million during 2007-2009, with 60% of employees participating in the program (text of presentation delivered at Health & Human Capital Management Congress, January 25, 2006).

Worthington Industries' incentive program has been in place since 2004, and has received a positive response from employees. After years of paying the entire cost of employee health insurance premiums, the steel-processing company determined that it needed to require employees to contribute to their own health insurance. At the same time, however, Worthington offered employees the opportunity to earn credits toward their premiums by participating in its Healthy Choices program. The program covers a three-year cycle, with the possibility of earning credits each year. In the first year, participants earn a credit if they complete a health assessment and a series of health screenings. In the second year, individuals classified as "low risk" based on the health assessment automatically receive a credit (provided they maintain their "low risk" status), while moderate- or high-risk individuals must agree to health counseling in order to maintain the discount. In the third year, moderate- and high-risk individuals receive credits if they demonstrate progress in meeting the goals established in year two. After the third year, the company hopes that employees will be "on the wellness track" and able to maintain their newly acquired healthy behaviors without direct incentives.

In the past, Worthington offered fitness classes, smoking cessation clinics, and health fairs to its employees, in addition to maintaining an on-site gym. According to the company's chairman and chief executive officer, participation in these voluntary activities was low, and generally limited to individuals who would otherwise pursue and maintain healthy lifestyles. With the new incentive structure, approximately 70% of Worthington's eligible employees have enrolled in the Healthy Choices program.

HEALTH PLAN INCENTIVE PROGRAMS

Like employers, health insurers are also seeking ways to promote member health and reduce cost. Many health plans have intensified efforts to provide healthy living and disease management information to their enrollees, and often have extensive information on their Web sites aimed at helping members take a more active role in staying healthy.

One of the first companies to offer cash incentives to its members was Blue Shield of California. In 2004, Blue Shield of California initiated Healthy Lifestyle Rewards, a pilot program that allows members to use on-line tools to track healthy behaviors. Individuals can select from a variety of "healthy lifestyle" programs, and those who consistently follow the program receive cash rewards. The pilot project was offered to a limited number of members in 2004 and 2005, and has been offered again in 2006. The program is being treated as a pilot because Blue Shield is still monitoring its effectiveness and gauging participant responses to determine if it is successful in improving member health and decreasing medical expenses.

Participants are asked to start with a confidential Health Risk Assessment, which provides a "sketch" of the participant's lifestyle, and helps him or her choose the program that could offer the most benefit. Individuals are limited to participation in only one program at a time, but can enroll in other programs following completion of a "post assessment" to determine progress toward goals. In 2005, the most popular programs were those targeting weight loss and increased physical activity, and Blue Shield paid more than $338,000 in rewards to 2,000 program participants (*www.mylifepath.com*).

Another health insurer that is offering rewards to its members is Independence Blue Cross in Pennsylvania. Through its Healthy Lifestyles programs, Independence Blue Cross offers existing managed care members a series of supplemental programs designed to promote healthy lifestyles. Members can participate in several incentive programs that reimburse participants $150 to $200 for health club memberships, weight management programs, and smoking cessation programs or aids. Members must enroll in each of the programs separately, and must meet certain requirements to be eligible for the reimbursement.

Unlike many programs, completion of an overall personal health assessment is not necessarily required to earn the rebates, but Independence Blue Cross does make a lifestyle questionnaire available to its members, which gives a detailed report on individual health status, and includes targeted recommendations about how to make lifestyle changes by utilizing one or more of the incentive programs (*www.ibx.com*).

GOVERNMENT-SPONSORED INCENTIVE PROGRAMS

Government programs have been slower to experiment with reward-based health incentive programs than the private sector. Recently, some governments, especially at the local level, have focused on population-based incentives that facilitate healthy behaviors, rather than reward individuals for adopting such behaviors. In this capacity, governments can play an important role in supporting behavior modification by providing organized resources to

help individuals learn why and how to make healthy choices, and by ensuring that community policies and services support these choices. Examples include government investment in walking or biking trails, sponsorship of community health fairs, maintenance of confidential domestic violence hotlines, or regulations requiring healthy food choices in public schools.

With states desperate to control spending, state Medicaid programs are one area in which governments are cautiously beginning to test incentive programs that link "rewards" to individual behaviors. In 2005, the Centers for Medicare and Medicaid Services approved a waiver application from Florida, allowing the state to implement, on a limited basis, Medicaid reforms that would include the use of benefit incentives. Under the new system, which is being piloted in two counties in 2006, Medicaid consumers can participate in the "Enhanced Benefits" program. Under this program, individuals can choose from an approved list of wellness activities (e.g., participation in weight loss or smoking cessation programs; keeping up-to-date on regular pediatric check-ups), each of which is assigned a certain value. Once an approved activity is completed, the value of the activity is deposited into the individual's Enhanced Benefit Account, which operates like a health savings account, and can be used to fund qualified health expenditures. Lower-income individuals who lose Medicaid eligibility retain access to any earned funds in their account for up to three years (Florida Medicaid Reform waiver accessed at *www.cms.hhs.gov*).

Iowa also has received a waiver to expand its Medicaid-eligible population using a set of rules that relies heavily on individual responsibility and incentives. Under the waiver, conditions of enrollment for the expansion population include receiving a comprehensive medical examination, participating in a health risk assessment, and completing a personal health improvement plan. The state plans to reduce premiums or co-payments for individuals who comply with the recommendations in their health improvement plan (IowaCare waiver accessed at *www.cms.hhs.gov*).

At the time this report was written, other states including Kentucky, Michigan, Missouri, and West Virginia were either awaiting waiver approvals or developing waiver requests to implement similar healthy behavior incentives among their Medicaid enrollees (Missouri Medicaid Reform Commission, December 22, 2005).

AMA POLICY

The AMA has established several policies that recognize the importance of promoting and maintaining healthy behaviors, and the relationship between preventable diseases and health care costs. In particular, Policy H-155.988, (AMA Policy Database), states that attention to personal health and safety can dramatically improve well-being and reduce health care costs. Policy H-170.986 encourages individuals to seek out and act upon information that promotes a healthy lifestyle, and encourages employers and governments to engage in health promotion activities and facilitate health awareness. In addition, Policy H-170.986 [10] advocates that third-party payers should provide options in benefit plans that enable employers and individuals to select plans that encourage healthy lifestyles and are most appropriate for their particular needs.

Policy H-170.995 asserts that consumers should be educated about the importance of maintaining healthy lifestyles, and supports finding ways to motivate healthy behaviors.

Policy H-425.993 states that the AMA believes that preventable illness is a major deterrent to good health and accounts for a major portion of our country's total health care expenditures; actively supports appropriate scientific, educational and legislative activities that have as their goals: (a) prevention of smoking and its associated health hazards; (b) avoidance of alcohol abuse, particularly that which leads to accidental injury and death; (c) reduction of death and injury from vehicular and other accidents; and (d) encouragement of healthful lifestyles and personal living habits; and strongly emphasizes the important opportunity for savings in health care expenditures through prevention.

GUIDING PRINCIPLES FOR REWARD-BASED INCENTIVE PROGRAMS

Because most reward-based lifestyle incentive programs are relatively new, or still in the pilot phase, limited information is available about their effectiveness in reducing health care costs and improving health outcomes for participants. Issues such as measuring compliance, ensuring fair treatment and opportunities for all participants, and managing legal boundaries are important considerations that will require additional experience and study to determine if reward-based incentive programs are an effective way to control heath care costs.

Nevertheless, given that the implementation of reward-based incentive programs seems to be a growing trend in many sectors of the economy, the Councils believe it would be beneficial to identify key elements of a strong incentive program. Based on a review of the literature, several themes emerged as key elements of a reward-based incentive program that has the potential to attract a large number of participants. Information from companies that design healthy behavior incentive programs, as well as those companies that utilize such programs, suggests that the following seven principles should be considered:

1. *Incentive programs should be designed with input from physicians, and provide opportunities for physicians to be involved in their implementation as appropriate*. Physicians play a key role in educating and motivating their patients to make healthy lifestyle changes and choices. By involving physicians in the development and implementation of healthy lifestyle incentive programs, sponsors are better able to design programs that maximize opportunities for improved health outcomes.

2. *Incentive programs should reward behaviors, not health status.* To ensure equity, it is important to design a program that allows all individuals to benefit equally from earnest program participation, regardless of current health status or documented health risks.

3. Although some programs ultimately tie benefits to outcomes achieved as a result of ongoing program participation, it is critical that programs be developed in a way that recognizes consistent lifestyle changes on the part of participants.

4. *Programs should be designed to assess and address risk factors as well as current health status.* Today's "healthy" person with a sedentary lifestyle could be tomorrow's heart disease patient. Prevention of future medical problems via substantive behavior changes is an important element of incentive programs. Although it may be easy to identify the need for change on the part of an overweight, diabetic smoker, it may be more cost-effective to determine who is at risk for developing those conditions over time, and to intervene to minimize those risks.

5. *Program participation should allow for at least some level of individual assessment and feedback.* The most comprehensive programs, and the ones that yield the most consistent levels of participation, appear to be those that tailor incentives to individual participant needs. Providing individuals with individual "action plans" to help meet the incentive requirements ensures that they can maximize the opportunities of the program, and also be engaged in tracking their behaviors and improvements in their health status. Physicians can play a critical role in designing action plans and helping individual patients meet their goals.

6. *Confidentiality of program participants must be maintained, possibly through use of a third-party vendor to track individual participation.* Incentive program sponsors will want some aggregate information about how program participants are utilizing the program, and how successful the program is overall. However, participants should not be asked to provide information about their specific activities or health outcomes directly to their employer. Many employers use a third party to administer and record health appraisals, or utilize an "honor system" and allow individuals to track their own participation via secure Internet sites.

7. *Incentives should be integrated into an ongoing program to encourage long-term changes in habits and behaviors.* One-time incentives are less successful in encouraging consistent behavior modification than ongoing incentives that offer continuing reinforcement. A $100 cash rebate for completion of a health assessment survey may yield many surveys, but a discount in insurance premiums over the course of the year will likely encourage participants to maintain their action plans on a regular basis.

8. *To the extent possible, efforts should be made to ensure that other policies, resources, and activities support and facilitate participation in healthy behaviors.* Individuals may be willing to modify behaviors, but they will be most successful if their environment is in alignment with their goals. Although a single program sponsor will be unable to influence every aspect of a participant's environment, there are ways to ensure internal consistency so that individuals do not receive mixed messages nor become tempted to avoid or discontinue their program participation.

DISCUSSION

Within this report, the Councils have attempted to highlight one strategy being used to help reduce the amount of health care resources spent on treating health problems that could be moderated or eliminated by behavioral changes. The Councils are aware and sensitive to the fact that incentive programs such as those described in this report do not address many critical public health issues, such as domestic violence and health disparities. However, incentive programs that offer benefits in exchange for specific healthy behaviors such as exercising and maintaining a healthy diet are becoming increasingly popular as employers, insurers, and governments continue to experiment with ways to control health care costs and improve health.

As noted, the use of reward-based incentive programs to promote healthy behaviors is a relatively recent development and, therefore, there are limited data on the long-term success of such programs. As these types of programs proliferate, it will be important to evaluate and identify the key elements of successful programs in order to extend this approach into other venues.

Throughout the 21st century, efforts to improve health will be shaped by important changes in the U.S. population. Efforts to prevent disease and to promote health will occur in the context of a nation that is growing older, becoming more racially and ethnically diverse, and continuing to struggle with issues such as poverty and domestic violence. Effective “incentives” will need to address these demographic and sociological issues, ensuring that sufficient resources are available to provide realistic, supportive, and consistent avenues for change and behavior modification.

Clearly, broad-based and permanent behavior change requires an integrated approach, with many incentives targeted toward individuals, the health care system, populations, and communities. To develop the most effective and comprehensive approach to behavior change, policy makers will need to involve a broad range of stakeholders, including physicians and other health care providers, insurers, employers, unions, and elected officials. Although the intent of this report is to highlight reward-based incentive programs, the Councils believe that an ongoing, broad-based approach will be necessary to effect significant change toward improving health behaviors.

RECOMMENDATIONS

The Council on Medical Service and the Council on Science and Public Health recommend that the following be adopted and the remainder of this report be filed:

1. That our American Medical Association support an integrated approach to encouraging the adoption of healthy lifestyles, involving coordinated efforts by physicians, other health care providers, insurers, employers, unions, and government.

2. That it be the policy of our AMA that reward-based incentive programs that are developed to promote healthy lifestyles should be guided by the following principles:
   a) Incentive programs should be designed with input from physicians.
   b) Incentive programs should reward behaviors, not health status.
   c) Programs should be designed to assess and address risk factors as well as current health status.
   d) Program participation should allow for at least some level of individual assessment and feedback.
   e) Confidentiality of program participants must be maintained, possibly through use of a third-party vendor to track individual participation.
   f) Incentives should be integrated into an ongoing risk-reduction and behavior change program to encourage and support long-term changes in habits and behaviors.
   g) To the extent possible, efforts should be made to ensure that other policies, resources, and activities support and facilitate participation in healthy behaviors.

(References for the Joint Report of the Council on Medical Service and the Council on Science and Public Health are available from the AMA Division of Socioeconomic Policy Development.)