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Reimbursement for Preventive Health Services: The U.S. Experience

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= **Abstract** =

This paper examines the failure to promote adequate preventive health care in the U.S. It focuses specifically on the preventive health services of screening, counseling, and immunization. It explores evidence on their effectiveness, as well as coverage under current private and public health insurance plans. It concludes with a proposal to expand health insurance coverage for preventive services and to reimburse physicians directly for preventive health services provided to patients.

The U.S. health system is one of the costliest in the world. It devotes 11. 2 percent of the Gross National Product to health, about $500 billion in 1987 (HCFA, 1987). It has many fine medical schools and hospitals with the latest medical technology. It provides high quality medical care to many of its citizens. Yet it all too often fails to prevent disease, injury, and even death that is avoidable with modern know-how.

A few statistics illustrate this point. Infant mortality stands at 10. 4 deaths per 1000 live births, 20th in the world among industrialized nations (NCHS, 1988). Forty percent of young children between the ages of 1 and 4 are not immunized against dreaded diseases that we know how to prevent—such as polio, diphtheria, pertussis, and tetanus. Smoking, excessive alcohol consumption, and other excesses of personal life styles kill thousands of people every year.

The U.S. has established health objectives for the nation in response to a call from the World Health Organization to promote health for all by the year 2000. (DHHS, 1979) Yet, over half of the objectives established for 1990 will not be achieved (DHHS, 1986).

One reason for this failure is the absence of adequate financial incentives for patients and physicians to promote preventive health care. We have a health system that is skewed toward high technology care, while neglecting to invest in basic preventive care. Only about two percent of the $130 billion federal health budget in the U.S. goes for preventive health activities. Preventive health care services are frequently not covered by private health insurance plans for public health financing programs. If we are to achieve our new health objectives for the year 2000, we must radically alter our approach to funding prevention under a variety of mechanisms.

This paper focuses specifically on preventive health services, and suggests ways in which both patients and physicians could be induced to put greater emphasis on prevention.

I. *Preventive Health Services*

The American College of Preventive Medicine has classified preventive health services into three categories: preventive screening, patient counseling and education, and immunizations and chemoprophylaxis (ACPM, 1988). Table 1 presents those preventive health services which the College recommends for coverage in health insurance plans provided by private companies and public programs.

Preventive screening is designed to identify persons at risk for a disease before it occurs. Examples include the Papanicolaou smear to detect pre-malignant cells in the cervix, and the measurement of serum cholesterol to identify individuals at risk for future coronary artery disease. Preventive screening may also provide for early detection of disease, permitting more successful treatment, as in the detection of cancer through mammography and fecal occult blood testing.

Table 1. Adult preventive health services

SCREENING TESTS

TARGET CONDITION	*PROCEDURE*
Cardiovascular Disease	
Coronary Artery Disease	Eiectrocardiogram
Hypercholesterolemia	Serum Cholesterol
Hypertension	Blood Pressure
Cancer	
Breast	Mammography; clinical exam
Colon and Rectum	Fecal occult blood; sigmoidoscopy
Uterine Cervix	Papanicolaou smear
Prostate	Digital rectal examination
Endocrine	
Diabetes Mellitus	Urinalysis
Obesity	Height, weight, body mass index
Infectious Disease	
Syphilis	VDRL
Gonorrhea	Culture
Acquired Immune Deficiency Syndrom (AIDS)	HIV antibody
Hematologic	
Anemia	Hemoglobin; hematocrit
Hemoglobinopathies	Hemoglobin electrophoresis
Renal	Urinalysis
Neurologic	
Vision Disorders	Acuity testing
Glaucoma	Tonometry
Hearing Loss	Audiometry
Mental Health	
Dementia	Cognitive testing
Depression	Screening instrument
Alcohol and Drug Abuse	Screening instrument

Source : American College of Preventive Medicine Testimony for the Physician Payment Review Commission, p. 5–6.

COUNSELING SERVICES AND PATIENT EDUCATION

- Smoking Cessation
- Exercise
- Nutritional Counseling
- Alcohol and Drug Abuse
- Stress and Social Support
- Preventive Dentistry
- Self-Examination Instructions

  Breast
  Testicles
  Skin

- Injury Control

  Motor Vehicle Injuries
  Drowning
  Fire
  Intentional Injury: Domestic Violence, Homicde, and Suicide
  Geriatric Falls
  Low Back Injury

- Sexual Practices and Family Planning

  Sexually Transmitted Diseases
  Acquired Immune Deficiency Syndrome (AIDS)
  Unwanted Pregnancy

IMMUNIZATIONS AND CHEMOPROPHYLAXIS

- Tetanus
- Diphtheria
- Pneumococcal Pneumonia
- Tuberculosis
- Hepatitis B
- Rabies
- Influenza

Physician counseling and education services are desi-

gned to educate and motivate patients regarding practices and behaviors that promote good health and prevent disease. This includes discontinuing use of tobacco and abuse of alcohol or addictive drugs, adopting a diet low in fat and salt but high in fiber, increasing physical activity, adopting responsible sexual practices, and wearing safety belts while riding in automobiles.

Finally, the College recommends immunizations and chemoprophylaxis aimed at preventing infectious diseases and long-term chronic diseases. This includes, for example, vaccines, drugs that lower serum cholesterol, and estrogen to prevent osteoporosis.

II. *Importance of Preventive Care*

Preventable disease and injury represents a significant portion of mortality in the U.S. The leading causes of death are heart disease, cancer, cerebrovascular disease, and injuries(NCHS, 1988). Research suggests that behavioral and environmental risk factors may account for 60 percent of all health problems(DHHS, 1079). Smoking is blamed for about 320,000 deaths annually, including deaths from lung cancer and coronary heart disease (DHHS, 1982; 1983). Traffic accidents account for 45,000 deaths and five million injuries annually. Many of these could be eliminated with proper use of seat belts.

Evidence is also accumulating on the effectiveness of risk reduction interventions. The control of hypertension is credited for much of the dramatic decline in cerebrovascular deaths in the last 15 years(NCHS, 1988). Tests for early detection of cancer have contributed to improved five-year survival rates for cancer of the colon, breast, and cervix(ACS, 1987).

While evidence is encouraging about the effectiveness of preventive health interventions, continued research is necessary to achieve more precise results on the effectiveness of interventions for different age, sex, and risk groups, and recommended periodicity for preventive care. More randomized controlled trials would be helpful in advancing our current knowledge.

The U.S Office of Disease Prevention and Health Promotion is preparing an extensive guide to preventive services for primary care providers. This guide will address about 100 preventive services, summarize the available evidence on effectiveness of these preventive care services, and make recommendations on the types and frequency of preventive health services which should be provided for different age, sex, and risk population groups. This report is expected in December 1988.

III. *Insurance Coverage for Preventive Health Services*

One major barrier to assuring that the population receives effective preventive health services, however, is the widespread tendency of health insurance plans to cover only care for diagnosis and treatment of disease or injury, rather than prevention. Dr. Arnold Relman, editor of *The New England Journal of Medicine,* blames inadequate insurance for preventive care for causing patients not to demand such services and the neglect of such services by physicians. He states, "Third parties reimburse little or nothing for counseling, screening examinations, checkups, and other forms of primary prevention. On the other hand, procedures, diagnostic tests, and other specialized services are reimbursed relatively generously. The inevitable result is that physicians in practice concentrate on procedures that are reimbursed and tend to neglect the personal services that are not"(Relman, 1982).

Health insurance coverage in the U.S. is available under a variety of mechanisms. Medicare is a federal government program that finances health care for elderly and disabled individuals. Medicaid is a federal-state government program that finances health care for certain groups of low-income individuals. Private health insurance plans offered by employers cover many working families. About 37 million people, or about 17.5 percent of the nonelderly population fail to be covered under any system. But even those fortunate enough to have health insurance may not be covered for preventive health services.

A. *Medicare*

Since 1981 there has been only one preventive service-pneumococcal vaccination—for which Medicare provides reimbursement. However, with the 1988 enactment of the Medicare Catastrophic Coverage Act, Congress recently mandated coverage of screening mammography. In addition, a number of demonstrations assessing health outcomes and costs associated with the provision of preventive services to Medicare beneficiaries are currently in progress(HCFA, 1988).

B. *Medicaid*

By federal mandate, Medicaid enrollees are entitled to a basic core of services, including some preventive care. Examples include family planning, prenatal and delivery services, and early and periodic screening, diagnosis, and treatment for children.

C. *Health Maintenance Organizations*

Health Maintenance Organizations (HMOs) are paid on a fixed capitation basis. As a result, they are responsible for a comprehensive range of services for a defined enrolled population. Capitation payment gives HMOs a financial incentive to keep patients healthy. As an organized care setting, HMOs may be better able to mount preventive programs for a large enrolled population, and use lower-cost non-physician health care professionals to provide certain health promotion programs or services.

Health Maintenance Organizations which are federally qualified are required to provide certain preventive services including:

- Immunizations;
- Well-child care from birth;
- Periodic health evaluations for adults;
- Voluntary family planning services and infertility services; and
- Children's eye and ear examinations.

D. *Private Health Insurance Plans*

Employers voluntarily may elect to provide health insurance coverage to workers. Some plans are subject to state laws establishing minimum benefit packages. In a recent survey of state health care coverage laws, half of the states reported at least one law mandating clinical prevention services and/or mandating evaluation of such benefits. The most commonly mandated services are well-baby care (6 states), diabetes education (6 states), cytologic screening (5 states), mammography (4 states), preventive care for children (2 states), and cardiac rehabilitation (2 states). Among the states Massachusetts has the most clinical preventive mandates required of its health care plans.

Traditionally, private health insurance plans have been reluctant to cover preventive services under their plans. The following 1987 Blue Cross and Blue Shield Association statement is illustrative of the philosophy of many insurance companies:

"In the strictest sense, the purpose of health insurance is to protect people from economic loss due to unanticipated, expensive illness. Use of preventive services is neither unanticipated nor expensive. Therefore, it is not included typically in insurance policies. Another reason for relatively little health insurance coverage is the lack of demand. Most group accounts have not requested that prevention services be included as past of their benefits" (Reidel and Gibbs, 1987).

However, several of the largest companies do provide coverage for preventive services. According to a recent Health Insurance Association of America survey, 35 percent of reporting insurance companies offer some type of preventive care coverage under goup health insurance contracts. Not surprisingly, the largest companies reported this type of coverage most frequently.

Two out of five insurance companies have health-related premium discounts included in their policies. Nearly half of the largest companies, particularly those in the Northeast, feature discounts.

Ⅳ. *Importance of Insurance Coverage for Preventive Services*

A recent study has demonstrated that insurance coverage is the single most important predictor of whether

people obtain preventive services(Woolhandler and Himmelstein, 1988). This study analyzed receipt of four screening tests: blood pressure checkup, clinical breast examination by a health professional, Papanicolaou smear, and glaucoma screening for a nationwide sample of women aged 45 to 64 years (N=10,653). Inadequate preventive care was defined as a screening interval of one year or more longer than judged optimal by published professional guidelines.

The study found that 38 percent of middle-aged women were inadequately screened for breast cancer, 27 percent for cervical cancer, 12 percent for hypertension, and 30 percent for glaucoma. Only 42 percent had received adequate screening for all four diseases.

As shown in Table 2, rates of inadequate screening were significantly higher for uninsured women. The relative risk of inadequate receipt of preventive care for uninsured compared with insured women was 1.60 for blood pressure checkups, 1.55 for Pap smears, 1.52 for glaucoma screening, and 1.42 for clinical breast examinations.

Multivariate anlysis exploring the independent contribution of insurance coverage while simultaneously controlling for other variables such as geographic location, race, income, education, and health status found that lack of insurance was the strongest predictor of inadequate receipt of preventive services. Low levels of education were also consistently associated with inadequate screening.

V. *Options for Improving Reimbursement for Preventive Care*

Increasing patient demand for preventive care and physician willingness to provide such care can be most directly influenced by covering preventive health services in health insurance plans. Several policy issues are raised by a proposal to cover preventive health services:

- Which services should be covered for people of different age, sex, and risk characteristics?
- What is the appropriate frequency of services?
- What method of payment is appropriate?
- Which types of health care providers should be eligible for reimbursement?

Each of these issues is difficult, and a consensus is far from developed. The first two issues regarding the selection and frequency of services is being addressed by the Task Force of the U.S. Office of Disease Prevention and Health Promotion.

Table 2. Rates of Inadequate Screening: Insured vs Uninsured Women

Screening Test	Women Inadequately Screened, %		Relative Risk Uninsured/Insured (95% CI)*
	Insured	Uninsured	
Hypertension screening	11	18	1.60(1.40−1.83)
Papanicolaou smear	25	39	1.55(1.43−1.68)
Clinical breast examination	36	50	1.42(1.33−1.51)
Glaucoma test	28	43	1.52(1,41−1.63)
Any test†	56	69	1.23(1.18−1.28)

*Clindicates confidence interval.
†Inadequate receipt of any one of the four screening tests.

Source : S. Woolhandler & D. Himmelstein "Reverse targeting of preventive care due to lack of health insurance," JAMA, Vo. 259, No. 19, p. 2872-2874.

The more difficult issue is how to pay for these services. Three basic methods are possible: fee for service for individual services, an all-inclusive fee for a defined package of preventive services appropriate for different age, sex, and risk patient groups, and capitation payments based on the age, sex, and risk of the patient. Fee for service is the dominant mode of payment for physician services in the U.S. This system has numerous advantages and disadvantages, but is likely to continue as a major mode of payment because of its acceptability to physicians.

The advantage of fee for service payment for preventive services is that it would encourage physicians to provide a comprehensive array of services at regular intervals to patients. It would likely reverse the tendency of physicians to spend limited time with patients

and to only address problems when patients are symptomatic. Its primary disadvantage is that it might lead to overutilization of preventive services, including providing services more frequently than needed or to population groups where scientific evidence has not clearly established effectiveness.

Another alternative is to specify a package of preventive services which should be provided to specific population groups, e. g. women ages 21 to 44, and to pay a primary care physician an all-inclusive fee for providing a defined package of preventive services to all patients enrolled with that physician. Separate packages of services and higher fees could be established for high-risk patients such as pregnant women, heart attack patients, hypertensive patients, drug or alcohol abusing patients, smokers, etc. This approach would use available scientific evidence to specify which services are effective for which population groups and specify a suitable frequency for such services. It would be less likely to lead to overutilization of preventive care, but might provide an incentive for physicians to provide only cursory services such as brief injunctions to patients to quit smoking rather than extended counseling sessions. Physicians paid a fixed fee for a bundle of preventive services would have an incentive to use no-physician personnel to provide as many services as possible in order to conserve on physician time. One difficulty with this approach is that many patients see multiple physicians for different problems. For example, a women may rely on both a gynecologist and an internist for primary care. Splitting the preventive care among physicians could be difficult.

Capitation payment is similar to an all-inclusive fee for preventive services but would require that all patients identify a single primary care provider or provider organization from whom they would rely for all health care, both preventive and curative care. Organizations would receive a fixed payment for preventive care built into premiums on an annual basis, regardless of whether patients actually received such services or not.

This approach has the disadvantage of not tying payment for preventive care directly to the provision of such care, and would not given HMOs or other organizations providing capitated preventive services a financial incentive to conduct outreach to patients. It would not create incentives for overutilization, but might well not sufficiently stimulate providers to provide good preventive care to all patients, especially those patients who were not sufficiently motivated to demand such care.

VI. *Summary and Recommendations*

Given the imporance of preventive health services in improving and maintaining the health of the public, it is important to take more aggressive measures to assure that all people obtain preventive health services which have been demonstrated to be effective for patients of given age, sex, and risk characteristics.

At present one of the most promising approaches to coverage of preventive services is the development of a package of preventive services for defined patient population groups, specified by age, sex, and risk characteristics. An all-inclusive fee for provision of such services at fixed frequencies based on available scientific evidence regarding effectiveness seems to strike the best balance among the incentives and disincentives that different payment methods would generate.

For such a proposal to move toward political acceptance, additional research on the effectiveness of individual services for different population groups, and demonstrations to test the impact of insurance coverage using different physician incentive payment methods need to be conducted. It is important that physicians and public health researchers in countries around the world cooperate in pooling research and demonstration experience to form the basis for this policy consideration.

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