Chapter 3
Defining Preventive Service for the Elderly

Although prevention encompasses a wide variety of actions by individuals or organizations whose goal is to improve health, the term "preventive services" refers here to a narrower set of interventions comprising medical procedures, tests, or visits with health care providers that are undertaken for the purpose of promoting health, not for responding to patient signs, symptoms, or complaints. Preventive services in this report are interactions between elderly people and health care providers, not interventions such as education through the mass media, seat-belt safety laws, etc.

A distinction is also necessary between preventive services and individual preventive behavior. For example, elderly people who quit smoking are engaging in an exceedingly effective preventive behavior (41,49), but the behavior is not a preventive *service.* A smoking cessation program or counseling would constitute a preventive service as defined here. This distinction is important, because different kinds of services designed to bring about the same change in behavior may vary widely in effectiveness and costs. Medicare would pay for the service, not for the change in behavior; hence, Medicare's interest is not only in the effectiveness of the change in behavior on health outcomes, but also in the effectiveness and costs of the service whose purpose is to bring about the change in behavior. In the case of smoking cessation for example, the effectiveness of smoking cessation counseling by physicians appears to vary widely across population groups and counseling techniques (17,20,52,53,84,1 00). [1] Advocates of increased Medicare support for preventive services often fail to distinguish between the effectiveness of behavior change and the effectiveness of services in citing evidence to support their views (13).

Preventive services have been described by two general frameworks. The traditional approach, used by most experts, classifies preventive services according to their ultimate goal (48,55):

. *Primary preventive services **are*** intended to prevent or delay the onset of disease. Immunizations and counseling on lifestyle changes are classic examples of primary prevention.

- *Secondary preventive services are* efforts to detect a disease or condition before it is clinically recognizable to avoid or delay its further progression. Screening procedures, such as mammography or Pap smears, fall into this category.
- *Tertiary preventive services* attempt to reduce the impact of already existing disease on the quality of a person's life by maintaining or improving his or her ability to function. These would include services such as education for diabetic patients or rehabilitation for stroke victims.

Health insurers, including Medicare, typically pay providers for undertaking defined activities, not for accomplishing goals. Many services whose goal is tertiary prevention are currently covered under Medicare as therapeutic or rehabilitative services. An alternative typology, shown in table 1, identifies preventive services that are generally excluded from Medicare coverage and are more in keeping with the fee-for-service payment system than is the traditional typology. There, selected preventive services are classified into three major categories: immunization; screening; and education or counseling. Health insurers typically offer specific services whose delivery can be audited; a "primary prevention" benefit unrelated to defined services would be too amorphous for a health insurance package.

The differences between the two taxonomies reflect the limitations of health insurance programs as mechanisms for providing appropriate preventive services. The goal-based taxonomy recognizes the importance of integrating prevention into the larger health care system. By including tertiary preventive services within the scope of prevention, the taxonomy also makes preventive services relevant for all people regardless of their health status. This is particularly important for the elderly (31).

The increasing incidence of chronic and disabling diseases with age and the frequency of multiple coexisting conditions in the elderly threaten the ability of many to live independently (see box A). In 1985, about 1 in 20 elderly residents of the United States were in nursing homes. Among people 85 years and older, however, about 1 in 5 were in

[1] Note, however, that the impact of smoking cessation on life expectancy is so great that even if counseling brings forth a very small reduction in the smoking rate, it may be very cost-effective (20).

nursing homes (43). If preventive services can avert the need for some of that institutional care, the payoff in terms of both better health and lower health care costs could be high.

Recent experience with programs of comprehensive geriatric assessment for impaired elderly people (e.g., the very old, frail, hospitalized, or disabled) suggests that these services, when undertaken by a well-trained team of professionals and when coupled with adequate follow-up services, can measurably improve the health status of the served group (16,65,79). The effectiveness of such programs depend on the target group selected and the scope of services offered and actually received (14,56,65,71, 79,83,85). Because such services must be tailored to the individual needs of the patient, which must be carefully identified, they may also be costly (26,79).

Regardless of whether these services are worth their costs for some portion of the elderly population, health insurance programs, including Medicare, do not encourage their development, and the current organization of health care delivery for the elderly inhibits their use. Because it is difficult to control the content of a visit, health insurers are reluctant to pay for comprehensive health assessments and follow-up activities. The delivery of health care to the elderly is often fragmented: the patient will often see a different specialist for each particular chronic condition, and frequently no one provider is managing the overall case. The high frequency of inappropriate prescribing and use of medications in the elderly is, at least in part, a reflection of this fragmentation of care (59,95). Today, such programs are typically affiliated with medical schools, teaching hospitals, or Department of Veterans Affairs' Medical Centers. In 1985, 114 such units were identified as operating in these institutions (26).

Table 1--Selected Potential Clinical Preventive Services for the Elderly

Immunizations:
- Influenza
- Tetanus
- Pneumococcus[a]
- Hepatitis B[b]

Screening:
- Cancer-screening:
  - —Breast cancer (clinical examination; mammography)
  - -Colorectal cancer (occult blood stool; sigmoidoscopy)
  - -Cervical and uterine cancer (clinical examination; Pap smear[c]; endometrial biopsy)
  - —Prostate cancer (clinical examination; ultrasound)
  - -Skin cancer (clinical examination)
  - —Melanoma (clinical examination)
- Blood pressure measurement
- Vision examination
- Glaucoma screening
- Hearing test
- Cholesterol measurement
- Mental status/dementia
- Osteoporosis (standard X-ray; quantitative CT; other radiological techniques)
- Diabetes screening
- Asymptomatic coronary artery disease (exercise stress test)
- Dental health assessment
- Multiple health risks appraisal/assessment
- Functional status assessment
- Depression screening
- Screening for hyperthyroidism or hypothyroidism
- Urine testing

Education and counseling:
- Nutrition
- Weight control
- Smoking cessation
- Home safety/injury prevention
- Stress management
- Appropriate use of medications
- Alcohol use
- Exercise

ABBREVIATION: CT. computed tomography.
a -currently covered by Medicare.
b -currently covered by Medicare for high risk patients.
c -coverage effective July 1, 1990.

SOURCE: Office of Technology Assessment, 1990.

*Box A—Health Problems of the Elderly**

"Progressive decrements in physical, mental and social function may occur with advancing age. Multiple factors contribute to this decline. . . First, there is a physiologic age-related decline in organ function from the fourth through the ninth decades, the magnitude of which varies considerably among different persons. While these physiologic losses do not significantly compromise the overall function of an elderly person, in the event of a superimposed illness or injury they may result in more profound dysfunction and a longer recuperation time than in younger persons, Physical and mental inactivity (disuse) may also compromise organ function with advancing age. Some of the decline in organ function that has been attributed to physiologic aging may instead be due to disuse and therefore be preventable or reversible with appropriate therapy. The prevalence of chronic physical and mental illness increases dramatically with age, particularly in persons 75 and older. The rates for chronic illnesses in the elderly such as arthritis, hypertension, organic heart disease, sensory impairments and urinary incontinence are about twice the rates in persons younger than 65. Nearly 25% of community-dwelling elderly have symptomatic mental illness, including 10% with significant depression and 5% with dementia. Potentially serious psychosocial stresses are common and include undesired retirement, inadequate finances, death of a spouse or the necessity of moving away from the family home. Many elderly persons will simultaneously suffer from several of these chronic physical or mental conditions.

''The magnitude of the decrements in physical, mental and social function varies tremendously among elderly persons. The vast majority of the elderly are able to tolerate and adjust to their functional impairments or disabilities and remain independent within the community. However, a significant minority have major functional disability. Nearly 20% of the elderly aged 75 through 84 and 30% aged 85 and older are unable to carry on major activities such as leaving home, doing housework or cooking, compared with 7% with similar disability who are younger than 65. Nearly 10% to 20% of persons aged 80 and older are unable to carry on even basic activities of daily living (bathing, dressing, eating, toileting) versus 4% younger than 65. Because of this dependency many of these elderly persons will require placement in a nursing home unless adequate social support can be obtained from family, friends, or the community. Whereas only *570* of persons older than 65 years are in nursing homes, 20% older than 85 reside in them; the elderly have a 20% chance of requiring at least temporary nursing home placement at some time in their life. "

***Quoted from B.M. Stults, "Preventive Health Care for the Elderly, " Western J. *Med.* 141(6):832-844, 1984.**