

Introduction:

Advances and Challenges in Care of Older People with Chronic Illness

By Gregg Warshaw, Guest Editor

This issue of *Generations* reviews the current approach to several common chronic medical illnesses in older adults and practice innovations to improve the care of older people with chronic illness. The ability of modern medical care to successfully treat acute infections, trauma, and other medical emergencies has allowed many Americans to live into old age, when the focus of medical treatment is now largely on the management of chronic illness.

Chronic illnesses are common among older adults, and it is not unusual for individuals to simultaneously have several. In the case of chronic illness, the focus of treatment is seldom on cure, but rather on slowing the progression and limiting the resulting functional limitations.

The articles in this issue document that much is known about the successful treatment of many individual chronic illnesses common among older people. The care of older people with multiple chronic illnesses is less well studied. Further, the U.S. healthcare system and Medicare continue to devote most of their available resources to treatment of the acute complications or late-stage outcomes of chronic illness. Few resources are applied to slowing the pro-

*The focus as more and more
people live into old age.*

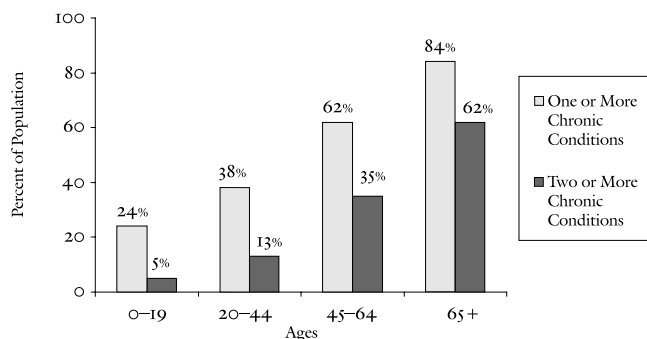
gression or preventing the complications of chronic illness.

CHRONIC ILLNESS

According to a common definition, chronic illnesses are “conditions that last a year or more and require ongoing medical attention and/or limit activities of daily living” (Hwang et al., 2001). Chronic conditions are more common in adults age 65 and over than in younger adults (Figure 1). Common chronic illnesses in older adults include the following: hypertension, coronary heart disease, congestive heart failure, arthritis, hearing and vision disorders, diabetes, stroke disease, and cancer (National Center for Health Statistics, 2004). Eighty-four percent of individuals age 65 and over have at least one chronic illness, and 62 percent have two or more (Anderson and Horvath, 2004). For example, among older adults with hypertension, only 17 percent have hypertension alone, while the other 83 percent have at least one other chronic condition (Anderson and Horvath, 2004).

Although the burden of chronic illness (referring to the consequences of the disease—the proportion of people disabled) is greater among older women, this situation is related to the

Figure 1
Chronic Conditions by Age Group



SOURCE: Partnership for Solutions. "Disease Management and Multiple Chronic Conditions;" Agency for Healthcare and Quality, MEPS, 1998.

longevity of women. Age-specific rates of chronic illness are comparable among men and women (Anderson and Horvath, 2004). Across all age groups, white populations have a slightly higher prevalence (46 percent) of chronic illness than do black (37 percent) or other racial groups (32 percent) (prevalence refers to the number of people who have a condition at a given time). However, black Americans are 1.5 times as likely as whites to report impairment of activities of daily living. The prevalence of chronic illness is similar across all family income levels (Anderson and Horvath, 2004).

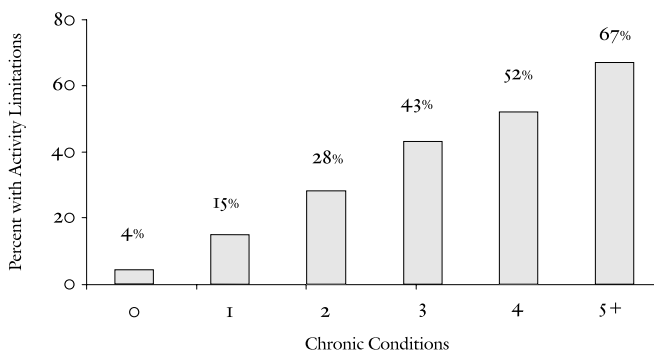
The burden that chronic illness places on the individual, families, and society is significant. Chronic illnesses, specifically heart disease, cancer, stroke, chronic lung disease and pneumonia, diabetes, and Alzheimer's disease, are among the leading causes of death in U.S. adults (National Center of Health Statistics, 2003). Living with chronic illness over many years can result in chronic pain, loss of function and independence,

and increased reliance on family and friends for support. As the number of an individual's chronic conditions increases, the prevalence of functional limitations is more common (Figure 2). When surveyed, one-third of older adults reported being in fair or poor health (Burton and Kasper, 2006).

The cost of medical care for older adults with chronic illness is financed by Medicare, Medicaid, private insurance, and out-of-pocket expenditures. The impact of chronic illness on medical expenditures is best illustrated by the large portion of Medicare

spending directed to adults with multiple chronic illnesses. Medicare beneficiaries who have five or more chronic conditions constitute 23 percent of all Medicare beneficiaries yet account for 68 percent of total Medicare spending. An example of a common complex of illnesses would be an adult with diabetes, hypertension, coronary heart disease, congestive heart failure, and kidney failure. Each year, older adults with such complexes of five or more

Figure 2
Activity Limitations by Number of Chronic Conditions



SOURCE: G. Anderson, "Hospitals and Chronic Care," PowerPoint Presentation to the American Hospital Association. Partnership for Solutions. June 16, 2004.

chronic illnesses see, on average, fourteen different physicians, make thirty-seven physician office visits, and have fifty prescriptions filled (Figure 3) (Anderson, 2005).

CHRONIC ILLNESS, MEDICATIONS, AND DISEASE-SPECIFIC TREATMENT GUIDELINES

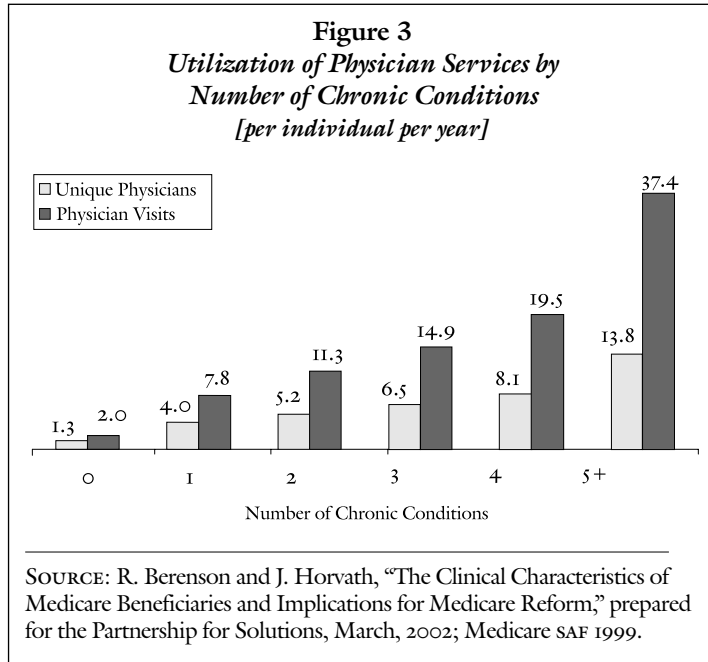
As described in the excellent disease reviews in this issue of *Generations*, the approach to the

Medicare program is a direct result of the central role that drugs now play in the management of chronic illnesses.

Professional organizations and expert panels have developed evidence-based disease-specific guidelines for managing many chronic illnesses. These guidelines provide a standard of care for the prevention, assessment, and management of diseases. The authors in this issue of *Generations*

have referred to clinical guidelines to describe up-to-date treatment recommendations. An excellent site for accessing these guidelines is maintained by the Agency for Healthcare Research and Quality (www.guidelines.gov). Each disease-specific guideline outlines the effective use of prescription medications to improve the care of individuals with that disease.

Because these guidelines are usually developed from research for the management of a single illness in patients under age 65 without additional conditions, application of the recommendations to older adults with multiple chronic illnesses requires an



prevention and better management of many chronic diseases includes avoiding tobacco, maintaining a healthy body weight, and exercising. In addition, the identification of asymptomatic disease through selected screening, such as for breast and colon cancer, hypertension, elevated blood lipids, and osteoporosis is an essential part of good medical care. Over the past twenty years the use of prescription medications to prevent the complications or treat the symptoms of chronic illnesses has expanded rapidly. Many of these pharmacological advances have had a measurable positive effect by slowing the progression of chronic illness or reducing associated symptoms. As a result, one third of all prescription medications are currently used by adults age 65 and over (Semla and Rochon, 2006). The recent addition of outpatient prescription medication coverage within the

individualized approach (Tinetti, Bogardus, and Agostini, 2004). There is evidence that the increased use of multiple prescription medications has created risks for older adults. The risk of adverse interactions between drugs or between drugs and the manifestations of diseases rises with the number of prescription medications used by an individual. The risk of injury from use of a drug is associated with the use of nine or more prescription medications or the ingestion of twelve or more medication doses in a day (Semla and Rochon, 2006). Such adverse drug events, as they are called, are estimated to be the primary cause of more than 10 percent of hospital admissions of older adults (Semla and Rochon, 2006).

The challenge of applying disease management guidelines in care of older adults is illustrated by a common example. A colleague

recently related an instance where she needed to intervene on behalf of her 92-year-old mother with her mother's cardiologist. The mother had recently been hospitalized with a mild heart attack and, following standard guidelines, was prescribed Tenormin (atenolol), a medication in the beta-blocker class that can reduce the risk of further heart attacks. Not long after she began taking the drug, my colleague's mother complained of considerable fatigue and a "fuzzy" head.

My colleague had heard these complaints from her mother six years earlier when the mother had been placed on the same medication for her hypertension. At that time, stopping the atenolol had alleviated the symptoms. The daughter called the cardiologist on behalf of her mother to request that the atenolol be discontinued. The cardiologist's response was that this was not possible, since not using a beta-blocker in the context of a heart attack was tantamount to malpractice! My colleague debated with the cardiologist the potential benefits of this protective medication versus the adverse symptoms and the declining quality of life that her 92-year-old mother was experiencing. The daughter won the debate, the medication was discontinued, and her mother felt much better. So far there has been no recurrent heart attack. Clinical guidelines are important advances in medicine that help to ensure that the latest research is applied in practice. How best to apply disease management guidelines in the context of the very old with multiple chronic illnesses is not yet known.

COMMON CHRONIC DISEASES

In this issue of *Generations*, expert authors provide up-to-date reviews of several chronic illnesses that occur commonly in older adults. Three articles are dedicated to the interrelated *heart and vascular diseases*: hypertension (Supiano); coronary artery disease (Kraschewski, Alexander, and Peterson); and congestive heart failure (Thomas and Rich). Coronary artery disease is the most common cause of death in adults age 65 years and older. Congestive heart failure is the most common cause of hospitalization and rehospitalization in people age 65 years and older. Coronary artery disease and hypertension are the most common causes of congestive heart failure in older people.

Interventions to address the modifiable risk factors for coronary artery disease in older people are major objectives of public health efforts. These interventions include the following: cessation of cigarette smoking, treatment of elevated blood lipids, treatment of hypertension, ingestion of a diet low in saturated fat and cholesterol, maintenance of ideal body weight, and regular physical activity.

As described by Bramen, *chronic obstructive pulmonary disease*, emphysema, and asthma remain important causes of disability and death in older adults. Many health professionals are not aware that there is a second peak (the first peak is in childhood) in the prevalence of asthma beyond the age of 65. The rate of death from asthma has increased most significantly in those age 65 and over, accounting for up to 45 percent of all asthma deaths. Smoking cessation at any age reduces rates of chronic obstructive pulmonary disease.

Pompei describes *diabetes mellitus* as one of the most common chronic ailments in older adults. The disease contributes to decreased life expectancy and serious medical complications (vision loss, kidney failure, and peripheral vascular disease), and a high risk of functional impairment and disability. Since the general population is aging and rates of obesity are increasing among middle-aged adults, people age 65 and older will likely constitute the majority of future diabetic people in the United States.

The median age for *cancer* diagnosis in the United States is 70 years. Cancer is recognized as a disease of older people, but Balducci states that specific approaches to treating cancer in older adults are a recent development. Many cancers in older adults are as responsive to treatment as they are in younger adults. Cancer therapy may result in additional adverse effects in older adults, but new approaches to treatment can alleviate many of these potential complications. In an older adult, treatment outcomes are correlated with the individual's functional status prior to developing the cancer.

Common *prostate diseases* in older men include prostate cancer and benign prostatic hyperplasia, a noncancerous enlargement of the prostate gland. Granville states that benign prostate hyperplasia develops in over half the men age

65 years and older and affects the overwhelming majority of men after age 85 years. New advances in treating the condition have reduced the need for prostate surgery in many older men. Prostate cancer is the second leading cause of cancer death in men. Recommendations regarding screening for and the treatment of prostate cancer differ among experts. Studies have not yet been able to confirm the benefit of early detection and treatment of all prostate cancers on all-cause mortality.

Parkinson's disease is a progressive neurodegenerative brain disease in which cell death and reduction in brain dopamine levels can lead to tremor at rest, slowed movements, muscle rigidity, and unstable gait. Tarsey and Simmons state that the incidence of Parkinson's disease increases dramatically with age. The disease begins insidiously and asymmetrically. In older adults treatment programs must be individualized, since medications commonly used to treat younger adults are not as well tolerated by elders.

Osteoporosis is a disease that results in a loss of skeletal bone mass. Stone and Lyles describe how osteoporosis is diagnosed by measuring bone mineral density (BMD). Osteoporosis is common in older women and men and can lead to disabling fractures of the hip and spine. In the United States the estimated annual numbers of hip and vertebral fractures in women are more than 250,000 and 500,000, respectively. The fracture rates for older men are about one-third the rates for women. The consequences of osteoporosis-related fractures include diminished quality of life, decreased independence, and increased mortality. Prevention of osteoporosis includes adequate calcium and vitamin D intake, weight-bearing exercise, and medication treatment.

Shay writes that *oral health* of older adults has markedly improved over the past forty years. The current generation of older adults has had access to preventive and restorative dental care. In the early 1960s more than 70 percent of adults age 75 and over had lost all of their teeth; by the 1990s the number was less than 40 percent. But with the retention of teeth later into life, older adults are also faced with late-life tooth cavities and periodontitis. Periodontitis is caused by plaque formation within the spaces between the gums

and teeth and leads to decreased support around the tooth and then loosening and eventual loss of teeth. Since teeth become less sensitive with age, it is not uncommon to observe profound yet asymptomatic untreated dental disease in older persons, which justifies a need for regular dental evaluation every six to twelve months.

According to Dodla and Lyons, *chronic pain* is common in older people age 65 and older (Potter). More than 25 percent of community-dwelling older adults and more than 50 percent of nursing home residents have chronic pain. Chronic pain is frequently undertreated. This is due to several factors. For example, some older adults tend to minimize or not report their symptoms, and clinicians may not adequately assess pain or may undertreat the pain for other reasons. Poorly managed, chronic pain can result in difficulty maintaining function, depression, anxiety, social isolation, poor appetite, and trouble sleeping.

PRACTICE INNOVATIONS

Many other efforts to improve care delivery are also under way. For example, the Centers for Medicare and Medicaid Services (CMS) is conducting demonstration projects designed to improve the quality and outcomes of care for older adults with chronic conditions. In many of these demonstrations, CMS is testing the effectiveness of case management or disease management services. Some of these demonstrations are based on the principle of "pay for performance" (CMS will pay the capitation fees only to the extent that the demonstration projects are able to document improvements in care).

In this issue of *Generations*, expert authors provide up-to-date reviews of several practice innovations to improve the care of older adults with chronic illness.

A creative study conducted at the Group Health Cooperative in Seattle, described by Levine, Phelan, Balderson, and Wagner, is testing the application of collaborative treatment planning for older patients in primary care. Primary care practice is not currently designed to provide high quality, comprehensive geriatric care. A collaborative approach to treatment planning may help address this challenge. Collaborative treatment engages the patient fully in the

care plan and utilizes the skills of an interdisciplinary care team.

The management of chronic illnesses frequently requires patients to move to several different care settings during an episode of illness. These transitions from care setting to care setting can be a vulnerable time during which medication errors, duplication of services, and unnecessary utilization of services are more likely to occur. Chalmers and Coleman at the University of Colorado Health Sciences Center Care Transitions Program are examining interventions to overcome this vulnerability and identify new approaches for improving outcomes for patients during transfers between care settings.

The Program of All-Inclusive Care for the Elderly (PACE) is a model of care that pools per-capita funds from Medicare and Medicaid to provide acute and long-term care to a group of frail older people. PACE is an optional program under state Medicaid systems. The goal of the PACE program, as described by Trice, is to help older adults remain in the community for as long as it is medically, socially, and financially feasible. Care is delivered by an interdisciplinary team. There are currently thirty-four PACE sites and six PrePACE sites in twenty-two states.

A PATIENT'S PERSPECTIVE

Finally, Achenbaum writes from the perspective of an individual living with chronic illness. His experiences provide a personal account of the courage required to face the complications and discomforts associated with living with chronic disease.

In conclusion, the contributing authors in this issue of *Generations* provide an excellent summary of the advances and challenges in the care of older adults with chronic illness. Pre-

venting the onset of chronic disease and, once it is diagnosed, reducing the infirmity and disability that can result, remains central to the goal of improving the function and well-being of the elderly. ❧

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