



## POLICY FORUM: DEMOGRAPHICS

# Aging in the Third Millennium

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**T**he aging revolution in the United States in the 20th century was the result of a spectacular 50% increase in life expectancy (1). What will happen to our aging society in the 21st century? The answer will depend on our success in improving the health of future older Americans.

## A Key Certainty: There Will Be Very Large Numbers of Older Americans

As a result of the aging of current baby boomers and the projected continuing increase in life expectancy, the number of Americans aged 65 and above is projected to increase from 35 million in 2000 to 78 million in 2050 (2). Even more impressively, the 4 million Americans aged 85 and above in 2000 is projected by the Census Bureau Middle Series to grow to almost 18 million by the year 2050 (see the figure) (2). Many demographers believe that these projections are underestimates (3), however, and that the Census Bureau Highest Series projections of 31 million very old Americans by 2050 are closer to the mark (see the figure) (2). The future requirements of this group are critical since most Americans will live into their 80s. An increasing older population in the next century does not necessarily present major problems if their economic, health, housing, and transportation needs are anticipated and the appropriate resources are developed.

## Another Certainty: Social Security

A presidential commission is currently meeting to examine alternative ways to ensure the solvency of Social Security (4). Many options will be explored, including private investment of funds, reductions in cost-of-living adjustments, raising the income cap for Social Security contributions, advancing the age of eligibility, and increasing Social Security tax levels. Because Social Security benefits provide the majority of the income of aged Americans (5), this program will undoubtedly continue with only minor adjustments.

## The Major Uncertainty: Health

The issue that will most affect the quality of life for tomorrow's older population is their future health requirements. The

health of an aging population will not only directly affect their future health care costs but it will also have enormous consequences for their economic, housing, and transportation needs. We can examine the future needs of older Americans using two scenarios that define the most likely range of future health changes (although other scenarios are possible).

**Scenario 1:** Through appropriate levels of investment in aging research, disease prevention and treatment, major advances are made in the conquest of the current major causes of disability in the older population. As a result, the average health of a future 85-year-old in the year 2040 resembles that of a current 70-year-old with relatively modest needs for acute and long-term care.

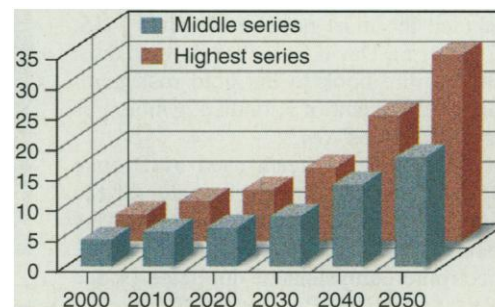
**Scenario 2:** Current low levels of support for research, prevention, and treatment are sustained. As a result, current health trends, which show small, if any, improvements in the average health of older people, continue (6). Even small improvements in the average health of the 85+ age group will be offset by the increasing ages within this cohort, and as a result, the average health of a member of the future 85+ age group in the year 2040 will not be very different from that of a current member of the 85+ age group, with its substantial needs for acute and long-term care.

## Medicare Depends on Future Health

Since the inception of Medicare in 1955, the costs of this program have increased exponentially (7). It is an age-based entitlement that pays most hospital and physician costs for older Americans. The costs for long-term care, which have grown at least as rapidly, are largely paid by the families of the older person. In the first five decades of the next century, there will be several trends that will place an enormous strain on future Medicare expenditures. First, after a brief respite, health care costs are escalating again, and a 3.3% annual increase in health care costs over the inflation rate is forecasted for at least the upcoming decade (8). Second, Medicare will be stressed by the large numbers of eligible older Americans. In 2021, the first of 76 million baby boomers will turn 75; the age when health care costs start to escalate. Third, the Medi-

care expenditures per enrollee for the fastest growing age group, those 85 and over, are much higher than the costs for those in younger age groups (9). Finally, the components of Medicare that are most likely to grow the most rapidly in the future are those most utilized by the rapidly growing oldest age groups: home health care and skilled nursing care. For home health care, the average expenditure per person for individuals aged 85 and over is almost five times higher than for those aged 69 and 70, and for skilled nursing home care it is almost nine times higher (9).

Under scenario 1, Medicare costs would rise less steeply because improvements in health would substantially lower costs per enrollee. Periodic readjustments similar to those made in Social Security, but larger in magnitude, should ensure the continued fi-



**Aging Boom.** The growth of the oldest age groups will surpass current middle census bureau projections (3).

nancial health of this entitlement. By contrast, under scenario 2, health care costs will grow substantially in the first two decades of the next millennium (10) and then accelerate even more rapidly. Although the small improvements in the average health of older Americans might provide some savings in the cost per older person, those savings will be dwarfed by the vastly larger numbers of older Americans needing health care. This future exponential growth of Medicare costs will place a great strain on federal budgets and will probably lead to one or more of the following results: (i) seniors paying a substantial part of their health care costs through higher premiums, more copayments, and more exclusions; (ii) Medicare changing to a needs-based program, with eligibility limited to poorer older Americans; or (iii) health care rationing on the basis of age.

## Housing and Transportation

Healthy older Americans can continue to live in their homes or relocate to the many retirement communities that will cater to every pocketbook and interest. Those who require ongoing assistance with the activities of daily living and do not have a spouse, child, friend, or significant other

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to care for them will need specialized housing. Over the past 20 years, there have been several trends that will undoubtedly continue into the next century. As hospital stays have shortened, sicker older patients have increasingly been transferred to nursing homes. Nursing homes that 20 years ago contained healthy as well as disabled older individuals are being transformed into facilities where substantial medical care is delivered (11). Those with less serious disease and disability are more and more frequently being referred to assisted living facilities, which are being built in increasing numbers (12).

Under scenario 1, it is likely that the vast majority of older people will remain in their homes with the assistance of home health care. Therefore, modest growth in the number of future nursing homes and assisted living facilities may suffice to take care of the moderately increased numbers of disabled older people who require more intensive care.

Under scenario 2, the demands for home health care and for admission to nursing homes and assisted living facilities by large numbers of frail elderly people would be enormous. The modest reimbursements available under Medicaid today provide few financial incentives to build nursing homes for low- or middle-income Americans. As a result, the small number of nursing homes that are now being constructed or will be constructed in the future will be largely for affluent Americans. Today, most of the assisted living facilities that are being built are for middle- and upper-income people, and they vary in their ability to take care of sick older Americans. As the number of disabled older Americans increases rapidly, nursing homes will become semi-acute hospitals with long waiting lists. Home health care services will have to expand rapidly to meet burgeoning demand. Assisted living facilities will be the sole remaining recourse for millions of disabled, frail, older Americans who can no longer live independently in their homes. Future assisted living facilities will resemble our current nursing homes in the intensity of medical services that they will be forced to provide. Nursing home capacity for Medicaid-eligible patients will be severely strained, and the costs of assisted living facilities will be beyond the means of poor, disabled, older Americans. If they do not have relatives, significant others, or friends to take care of them, we may face the gruesome prospect of poor, disabled, homeless older Americans living out the end of their lives on city streets and in parks.

One of the critical abilities that defines the independence of an older person is the ability to drive a motor vehicle. Unfortu-

nately, older people have a much greater risk of automobile accidents (13). The accident rate per mile driven by people in older age groups is comparable with the notoriously bad rates for those aged 25 and under (14). However, dangerous driving is more a function of the cognitive and sensory impairments that accompany age-related diseases (14) than of the chronological age of the driver.

Under scenario 1, the improvement in the health of older Americans should result in decreased cognitive and sensory impairment. This should improve the safety of older drivers and allow additional millions of older Americans to remain independent. Under scenario 2, transportation resources will be severely taxed to maintain the independence of seniors, because there will be enormous numbers of older disabled people needing transportation. In urban areas, needs for transportation services may overwhelm existing resources and require the development and funding of additional specialized shuttle services. In rural areas, it may be impossible to provide necessary services to large numbers of frail older Americans.

### The Economic Status of Older Americans

Since the introduction of Medicare in 1966, the burden of health care costs for older Americans has shifted to this federal entitlement. Under scenario 1, the economic status of older Americans will not be substantially affected. They may have increases in their out-of-pocket health care costs, but this should not place an undue stress on their economic welfare. Under scenario 2, we could see a drastic change in the wealth of older Americans. The additional health care, housing, and transportation costs could result in many millions of older Americans moving below the poverty line.

### Investment in Research

If our nation is serious about averting the future exponential growth of health care, housing, and transportation costs for the elderly, we must start now by providing adequate funding for the prevention and effective treatment of the chronic diseases that afflict the older population. A quantum increase in research on chronic diseases is necessary before we can make a dent in the projected growth of health care costs related to an aging population. In 1998, approximately \$1 billion was spent by the federal government on aging research (15). By comparison, a third of the more than \$1.146 trillion spent on U.S. health care (16) was spent on health care services for older Americans. No corporation that spent a mere 0.3% of its revenues

on research would last long in a competitive marketplace. It is time for our nation to invest appropriate levels of funds in research to prevent the diseases of aging. If we invest a reasonable percent of the Medicare budget in research now (2 or 3%) we could save future generations from the physical, sociological, and economic scourges of aging with the dire consequences of millions of ailing and impoverished elders.

By applying today's biomedical technology to the diseases of aging, future newborn children could be screened for genes that predispose them to the chronic diseases of aging, and their environments could be altered to permit successful healthy transitions throughout life. This could enable all of us to look forward to independent, productive, healthy lifespans with little dependency and disability. We then might have the pleasing prospect of living lives like the perfectly constructed "one-hoss shay" of Oliver Wendell Holmes, which, after lasting exactly 100 years, collapsed in a single day (17).

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