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Population ageing in the United States of America: implications for public programmes

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Like the rest of the world, the US is an ageing society. This will place substantial additional pressure on publicly-funded health, long-term and income support programmes for older people. This paper analyses the demographic changes that the US faces and how they will affect those programmes, concentrating on the factors that may affect the economic burden that these programmes impose.

Demographic change and its consequences for health care

An ageing society

Like the rest of the world, the US is an ageing society (Table 1). Between 2000 and 2050, the number of older people is projected to increase by 135%. Moreover, the population aged 85 and over, which is the group most likely to need health and long-term care services, is projected to increase by 350%. Over this time period, the proportion of the population that is over the age of 65 will increase from 12.7% in 2000 to 20.3% in 2050; the proportion of the population that is age 85 and older will increase from 1.6% in 2000 to 4.8% in 2050.

Two points are noteworthy about this demographic change. First, while a significant proportion of the US is elderly, much of Europe already has a higher proportion of its population that is over the age of 65. For example, in 2000, 16.0% of the population in the UK and 16.4% of the population of Germany was over the age of 65.[1] Thus, other countries are already having to cope with the impact of an ageing society to a greater extent than the US.

Largely as a result of higher fertility rates and immigration, America's population, while ageing, is nonetheless likely to remain distinctly younger than other developed countries.[2]

Second, the future strains of population ageing in the US derive not so much from the growth in the elderly population or the 85 and over population, *per se*, but rather from the slow projected growth in the non-elderly, working age population. Between 2000 and 2050, the population age 16–64 is projected to grow by only 33%. The ratio of people ages 16–64 to those age 65 and over (the aged dependency ratio) is projected to decline from 5.1 in 2000 to 2.9 in 2050, a 43% decline. The slow growth in the working age population will mean that there will be relatively fewer people to pay the taxes necessary to support public programmes for the older population and fewer people to provide the services that older people need.

Table 1 Population of the US, by age, 2000 and 2050 (in millions)

Age	2000	2050	% change
Total	275 306	403 687	46.6
16–64	177 974	236 602	32.9
65+	34 835	81 999	135.4
85+	4312	19 352	349.8

Source: US Bureau of the Census.

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Implications for organization and delivery of health care

The ageing of the population will have a major impact on the organization and delivery of health care. Of particular importance will be the shift from acute to chronic illnesses and the likely growing shortage of health care workers, especially nurses and paraprofessionals.

Shift from acute to chronic illnesses

The ageing population will require focusing on chronic diseases, such as Alzheimer's Disease, heart disease, and osteoporosis, rather than acute illnesses. First, the style of medicine will need to change from one-time interventions that correct a single problem to the ongoing management of multiple diseases and disabilities; doctors and patients will have to have an ongoing relationship designed to help patients cope with illnesses rather than curing them.[3] Second, with chronic illness often comes disability, meaning that long-term care services, such as nursing homes, home health, personal care, adult day care, and congregate housing, will become much more important sources of care. Third, new ways will need to be found to integrate medical and long-term care services, a feat that will be difficult in the US because of the fragmentation of the financing and delivery systems.[4]

Health and long-term care workforce issues

There has been increasing concern about the current and future supply of acute and long-term care workers, especially nurses and paraprofessional staff, such as certified nurse assistants, home health aides, and personal care attendants.[5–7] Unskilled paraprofessionals, who provide the bulk of long-term care services, are overwhelmingly women and disproportionately drawn from racial and ethnic minorities. Low wages and benefits, hard working conditions, heavy workloads and a job that has been stigmatized by society make worker recruitment and retention difficult.

While a short-term recession could temporarily relieve the worker shortage, the gap between the large projected increase in demand for acute and long-term care services and the slow projected growth in the labour force signals a dramatic long-run imbalance. Because of the ageing registered nurse workforce, by the year 2020, the registered nurse workforce is forecast to be roughly the same size as it is today, declining nearly 20%

below projected workforce requirements.[6] To attract additional workers in the future may require higher wages.

Public programmes for older people

Like other developed countries, the US has large public programmes for the older population that provide health care, long-term care, and income support. While these account for the vast bulk of government spending for the older population, there are also numerous other smaller public programmes that provide housing, social services, transportation, and additional cash assistance.

Acute care financing

Acute care services for older people, such as hospital and physician care, are financed through a mix of public and private sources. Medicare is a publicly financed and administered, social insurance programme, with near universal eligibility. In addition to older people, the programme also covers younger people with disabilities who have a significant work history. The programme operates as an open-ended entitlement to individuals.

Financing for hospital and some other services ('Part A') is through a payroll tax of 2.90% (split evenly between workers and employers) with no cap on the earnings subject to taxation; financing for physician and some other services ('Part B') is through premiums paid by beneficiaries and general revenues. While enrolment in Part B is technically voluntary, virtually all older people enrol. Medicare expenditures in 2000 totalled $224 billion, slightly more than 2.2% of gross domestic product (GDP).[8]

Medicare covers a fairly broad range of services, but does not cover prescription drugs outside of institutions, dental services, or eyeglasses, and has extensive cost-sharing requirements. The programme covers a limited amount of skilled nursing home and home health care. Proposals to provide coverage for outpatient prescription drugs for older people was seriously considered in 2000 and 2001. The declining economic situation and the shift of priorities for spending to anti-terrorism activities in the wake of the tragedies of 11 September 2001, make enactment of additional benefits unlikely. In the absence of action at the national level, some states are developing pharmaceutical assistance programmes for the low-income elderly and disabled populations who are not eligible for Medicaid, the federal-State health programme for low-income people or people with high medical expenses.[9]

Because of gaps in Medicare coverage, important additional sources of financing for acute care services for older people include private supplemental insurance provided by employers or purchased by individuals, health maintenance organizations, Medicaid, and out-of-pocket payments. In 1997, only 10% of Medicare beneficiaries did not have some sort of other third-party coverage.[10]

Medicare beneficiaries have complete freedom-of-choice of providers, who are overwhelmingly private, non-governmental organizations or suppliers. An important recent trend has been the increase and then levelling off during the 1990s of enrolment in health maintenance organizations, which limit the choice of providers. As of 2000, 16% of Medicare beneficiaries were enrolled in Medicare health maintenance organizations.[11]

Long-term care financing

Financing for long-term care services, such as nursing home care and home and community-based services, is through a combination of Medicaid, Medicare, state-funded programmes, out-of-pocket payments and private insurance. By far the dominant source of long-term care funding is Medicaid. Approximately two-thirds of nursing home residents have their care paid by Medicaid.[12] Financial eligibility standards are strict, with Medicaid nursing home residents having to contribute all of their income towards the cost of care, except for a small personal needs allowance of about $30 a month. Individuals may keep only $2000 in financial assets, although the home is generally an exempt asset. With some exceptions, the Medicaid programme operates as an open-ended entitlement to individuals. Federal and state Medicaid long-term care expenditures for older people with disabilities were about $43 billion in 2000, about 0.4% of GDP.[8,13] Many states also operate their own programmes for home care, although most are fairly small.

Medicare covers skilled, relatively short-term care provided by home health agencies and nursing homes, not traditional long-term care. Private long-term care insurance has been growing steadily since the mid-1980s, but finances $<5\%$ of total long-term care expenditures.[14] The lack of public or private insurance coverage and the means-tested character of Medicaid means that out-of-pocket payments account for a large portion of long-term care expenditures.

Retirement income

Retirement income is financed through a combination of public and private pensions, savings, and welfare payments. Approximately 44% of households including a person over the age of 65 have private pensions; $<5\%$ of older people receive means-tested welfare payments.[11]

Publicly-financed retirement pensions are primarily funded through the national Old-Age and Survivors Insurance programme, more commonly known as Social Security, which is a universal income support programme for older people and is the main source of income for the retired. In addition, the Disability Insurance programme provides income support to people with disabilities with a significant work history. Retirees are eligible for reduced benefits at age 62 and full benefits at age 65. In order to receive benefits, individuals must work for at least 10 years or be the spouse of an individual who worked for at least 10 years. Benefit levels vary with an individual's income during his or her working life, with lower-income people receiving a higher replacement rate than higher-income people. Unlike most private pensions, Social Security benefits increase each year with inflation.

Social Security and the Disability Insurance programmes are primarily financed by payroll taxes levied on salaries. Employers and employees each pay 6.2% of earnings for a total of 12.4% of salary, up to a maximum level, which increases each year with average wages. In 2000, Social Security and Disability Insurance paid $415 billion in benefits, approximately 4.2% of GDP.[15]

Economic importance

As the population ages, public expenditures are projected to grow as a per cent of GDP. Table 2 presents official government projections for Medicare and Social Security expenditures and

Table 2 Per cent of gross domestic product for Medicare, Social Security and publicly-funded long-term care, 2000 and 2050

	2000	2050	% change
Medicare	2.2	6.0	173
Social Security	4.2	6.5	55
Medicaid long-term care	0.4	0.7	75
Total	6.8	13.2	94

Sources: Authors' calculations based on: Board of Trustees, *The 2001 Annual Report of Trustees of the Federal Old-Age and Survivor's Insurance and Disability Insurance Trust Funds*, (Baltimore, MD: Social Security Administration, 2001); Board of Trustees, *2001 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund*, (Baltimore, MD: Health Care Financing Administration, 2001); *US Congressional Budget Office, Projections of Expenditures of Long-Term Care Services for the Elderly*, (Washington, DC: US Congressional Budget Office, 1999); and, Wiener JM, Illston LH, and Hanley RJ. *Sharing the Burden: Strategies for Public and Private Long-Term Care Insurance* (Washington, DC: The Brookings Institution, 1994).

projections by Wiener, Illston and Hanley for long-term care expenditures.[16] These estimates are static rather than dynamic extrapolations of existing patterns of use and cost. Overall, Medicare, Social Security, and the Medicaid funding for long-term care are projected to grow from 6.8% of GDP in 2000 to 13.2% in 2050. Health and long-term care programmes are projected to increase from 2.6% of GDP in 2000 to 6.7% of GDP in 2050.

In addition to the sharply greater number of beneficiaries, the large increase in GDP for health and long-term care is a function of three factors. First, demographic pressures raise spending for Medicare more than in other industrial society's government-sponsored health care programmes because the American programme only covers the elderly and some people with disabilities. All other health programmes in developed countries cover the entire population. Between 2000 and 2050, the proportion of the American population that will receive its health care through Medicare will increase by about 50%.

Second, older people have higher average expenditures than do younger people. For example, in 1995, per capita personal health expenditures for a person aged 65 and older were 4.6 times those of people under age 65, a ratio that has been steadily growing since at least 1966.[17]

Third, Medicare and long-term care expenditures as a proportion of GDP is projected to increase more than Social Security because of the assumption that average health care costs per person will increase considerably faster than per capita GDP. Projections of Medicare costs 50 years into the future depend heavily on this assumption, which is very uncertain and has fluctuated wildly. For example, because of changes primarily in assumptions of the rate of increase in health care costs, Medicare was estimated to be 7.8% of GDP in 2050 in the government projections made in 1997, but 4.8% of GDP in estimates made in 2000—a difference of more than the cost of the entire Medicare programme in 2000.[18,19]

Factors potentially affecting the economic burden

A number of factors, including changing disability rates, the size of the economy and efforts at privatization may affect how much of an economic burden these programmes impose in the future.

Disability rates

Some researchers have found evidence of declining disability rates, which might moderate the growth in the use of acute and long-term care services. For example, using the National Long-Term Care Survey, Manton and Gu found that on an age-adjusted basis, the proportion of the elderly population that was disabled declined from 26.2% in 1982 to 19.7% in 1999.[20] Other researchers using other data have also found evidence of a decline in disability.[21–24] This disability rate decline might partially explain the reduction in American nursing home use rates between 1985 and 1995.[20,25] These findings are consistent with research in other countries.[26,27] On the other hand, other researchers have not found this decline in disability or have found that it relates primarily to less severe levels of disability.[23,28]

If these disability declines continue, they could, in theory, have a major impact on use of both acute and long-term care services. People with substantial disabilities have three times the average Medicare expenditure of beneficiaries without substantial disabilities.[29] Singer and Manton estimated that a continued decline in disability could preserve the long-term care fiscal stability of Medicare and Social Security.[30] However, even under optimistic assumptions about declines in disability rates, there is likely to be a substantial increase in demand for acute and long-term care services because of huge increases in the absolute numbers of the oldest old.[13]

Size of the economy

While most public policy has focused on public expenditures for older people, less attention has been given to the size of the economy. The Social Security actuaries project that the US economy will grow from \$10 trillion (10^{12}) in 2000 to \$111 trillion in 2050 in nominal dollars.[15] The financial burden of public programmes for older people will partly depend on how fast the economy grows. For example, in projecting long-term care expenditures, Wiener, Illston and Hanley estimated that public long-term care expenditures as a percentage of GDP could triple from 1993 to 2048 if the US economy were to grow by only 1.5% per year adjusting for inflation, but barely increase at all if real economic growth were 3.5% per year.[16]

There are also factors that could increase the number of workers, including immigration and increased labour force participation, which would provide workers to pay taxes to support the older population. The US has always had a large number of immigrants and about 11% of the US population is foreign born.[31] The major limit on the number of immigrants is the restrictions imposed by the government. The terrorist attacks of 11 September 2001 have sharply undermined evolving support for immigration liberalization and made the admission of additional immigrants highly unlikely, at least for the time being.[32] Even with additional immigration, it is questionable that it would occur at levels necessary to significantly counteract the impact of population ageing.[33] Increased immigration, of course, raises a number of difficult issues about integrating a new population into American society and also questions of how willing this new foreign-born population will be to pay taxes to support the ageing native population.

The other factor that could increase the economy is that a higher percentage of the population could enter the workforce.

As workers become more scarce, labour force participation rates may rise as employers compete for workers. Labour force participation for women has risen substantially over the last 30 years, but is still well below that of men. In 1998, the labour force participation of men age 45–54 was 89%, while it was only 76% for women.[34] Higher labour force participation rates for women, however, may deprive older people of informal care, increasing demand for paid long-term care services.

Older people themselves also may be a source of additional workers. In a recent survey, nearly a third of 'baby boomers' indicated their desire to work at least part-time during their retirement years.[35]

Privatization

Conservatives and some moderates are convinced that privatization of Medicare, Social Security and long-term care is necessary to address the future burdens of an ageing population. For Social Security, the main proposal has been to divert some of the payroll tax to private accounts that could be used to purchase stocks and bonds. The recent downturn in the stock market has made this proposal less attractive.

For Medicare, privatization has been proposed mostly through the introduction of competing private health plans to substitute for the current system of government funded, but privately administered health care.[36,37] Although proposals vary, most would have the national government pay a fixed contribution towards each individual's health insurance premiums. People who wanted a more generous health plan would pay the difference between the premium and the government contribution. The assumption of this strategy is that competition will force insurers to find ways to control costs while maintaining good quality care. Opponents fear that health plans would compete based on risk selection rather than efficiency or quality and that the government contribution would not keep pace with costs over time, shifting costs to older beneficiaries. They worry that the net result would be a two-tiered system, in which wealthier older people would have significantly better and different coverage than people who are financially less well off.

Similar to the strategy for acute care, conservatives and some moderates are promoting private long-term care insurance as a way of financing long-term care, hoping that it will reduce dependence on public programmes, especially Medicaid. Most research suggests that only a small fraction of the elderly population can afford good quality policies and that the non-elderly population is unwilling to voluntarily purchase insurance in large numbers.[16,38]

Conclusion

The ageing of the population in the US will place substantial additional economic burden on public programmes. Looking to the future, a great deal will depend on the economy and the political will to control health care costs and pay for these programmes.

The economy

The economic forecasts have been complicated by tax cuts and terrorism. President Bush's tax cut, which was enacted in Spring 2001 and which will reduce government revenues by $2 trillion over 10 years, has been criticized for not using the then projected budget surplus to shore up public programmes for older people and, indeed, for depriving the public sector of the funds that will be needed in the future. Critics also contend that the tax cut will disproportionately benefit upper-income individuals. On the other hand, at the time of passage, supporters of the tax cut asserted that President Bush's plan would help these programmes by paying off a substantial portion of the public debt (although not as much as proposed by the critics of the tax cut) and by preventing the surplus from being spent on other public programmes.

The terrorist attacks of 11 September 2001 have had at least two economic consequences. First, they have exacerbated the economic downturn of 2001 and called into question the rate of economic growth for the future. Second, it has stimulated substantial additional government expenditures for domestic and foreign anti-terrorism activities, precluding government spending for social programmes and for public debt reduction. Thus, the vast budget surplus on which the tax cut was premised is now called into question or is being used for purposes other than programmes for older people. At the time of writing this paper (October 2001) the Bush Administration and Congress seem unwilling to repeal or postpone various elements of the tax cut. Without the budget surplus, the reduction in public debt, which was the main strategy for dealing with the ageing of the population, is now doubtful.

Importance of political decision-making

The ageing of the population will almost certainly impose additional fiscal burdens on the public sector in the US, especially for health and long-term care. However, health care costs and their rate of growth depend only partly on demographic forces; they depend much more on political decision-making. The US spends more on medical care as a share of GDP than any other country, in part because it provides more high technology services but mainly because American insurance funds pay higher prices than are paid elsewhere. These higher costs mean that each additional older person requires greater expenditure, but that is not the direct consequence of an ageing society; it is the consequence of a political system that creates high health care costs.

Indeed, the empirical evidence suggests that there is surprisingly little relationship between ageing and national health care costs, at least in the past. Examining data from 1960 to 1990, Marmour and Oberlander found no correlation across Organization for Economic Co-operation and Development nations between ageing populations and growth in medical costs.[39] Analysing eight industrialized countries for the period 1993–1995, Anderson and Hussey found very little correlation between the percentage of the population that is elderly and the percentage of GDP spent on health care.[1] Gruber and Wise report that from 1980 to 1991, there was a relatively small positive relationship between changes in the elderly share of the population and changes in national health spending.[40] The likely reason is that other policy factors, namely the design of cost control policies, have been far more important.

The other political dimension is that the 'affordability' of any government programme depends not just on its costs but on the nation's willingness to contribute to the support of government programmes and the extent of other spending obligations.[41] As a political matter, whether any given programme can survive

fiscal stress depends on its relative popularity.[42] On this matter, there is no doubt: Social Security and Medicare are by far the most popular domestic social programmes; long-term care is not as favoured, but still ranks highly. For example, in a poll conducted before passage of the tax cut of 2001, 65% of respondents indicated support for using the projected budget surplus to preserve Social Security and Medicare or pay off the public debt; only 18% wanted to cut taxes.[43] Voters of all ages, not just older people, have repeatedly indicated their unwillingness to reduce benefits or eligibility for these programmes. The often predicted generational conflict has yet to appear. Whether that will continue to be true in the future will probably be the most important determinant of the economic burden of ageing programmes.

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