

POPULATION REFERENCE BUREAU

REPORTS ON AMERICA

May 2002

Vol. 3 No. 1

GOVERNMENT SPENDING



IN AN **OLDER**
AMERICA

BY RONALD LEE
& JOHN HAAGA

GOVERNMENT SPENDING IN AN OLDER AMERICA

The population of the United States is getting older. In 1950, when the baby boom was just getting underway, 8.2 percent of Americans were age 65 or older; now, 12.6 percent are. The number of Americans over age 65 is expected to reach 20 percent by the year 2030, when the nation as a whole will have a higher percentage of older people than Florida does today.

The U.S. population's aging is the result of two long-term trends: declining fertility rates and increasing longevity. The long-term decline in fertility rates was temporarily interrupted during the baby boom, when 76 million babies were born in the United States between 1946 and 1964. The boom produced an unusually large cohort, whose members will join the population over age 65 beginning in 2011. Population aging will thus accelerate during the second and third decades of the 21st century.

The aging of the population affects everyone: marketers, builders, health officials—and taxpayers, young and old alike. Older people receive more in public benefits, notably Social Security and public spending on health care, than they pay each year in taxes. Of course, there is no assumption that the tax payments and public expenditures of an individual or an age group should balance in any given calendar year. Those receiving Social Security benefits have typically paid taxes for many years to support the system, and they have also raised and supported current and future taxpayers. It would be misleading to look at old people only as burdens for the public purse. Nonetheless, the fact that the age group that produces the largest net deficit for the public sector is growing rapidly does pose a challenge for government—and ultimately for voters. Public finances must be adapted to deal with a new demographic situation.

Current forecasts imply that demographic changes will force Americans to choose one of four options: get used to the government share of the economy being much greater than they have been used to in peacetime; make age-related benefits less

generous or less universal; restructure the systems to reduce the public obligation; or develop some combination of the first three. The choice is not merely a technical matter for accountants and policymakers. The current systems have important effects on the distribution of income and welfare, so reform proposals must be evaluated on the basis of Americans' perceptions of fairness, as well as on the changes' effects on public budgets. But one thing is clear: The sooner steps are taken to deal with the coming changes, the less stressful the situation will be, both for the beneficiaries of public programs and for the taxpayers who support them.

Much of the current political discussion deals with technical questions, such as the actuarial balance in trust funds set up to pay for social insurance programs, or with proposals for new benefits, such as adding a prescription drug benefit or individual retirement accounts. But there are some basic underlying issues: making the programs financially sustainable under new demographic conditions, and ensuring that individuals, generations, and groups within generations are treated fairly. This report is not intended to support specific reform proposals, but rather to present data and criteria for judging the alternatives.

RONALD LEE is professor of demography and economics at the University of California at Berkeley, where he also directs the Center for the Economics and Demography of Aging. He works on developing methods for forecasting mortality and making probabilistic population forecasts, and on making long-term probabilistic projections of population aging's impact on government budgets.

JOHN HAAGA is director of the Population Reference Bureau's domestic programs group, which publishes information on U.S. population trends and their implications. Before joining PRB, he was staff director for studies of the demography and health of older Americans at the Committee on Population of the National Academy of Sciences. He is an adjunct lecturer in the School of Public Affairs at the University of Maryland.

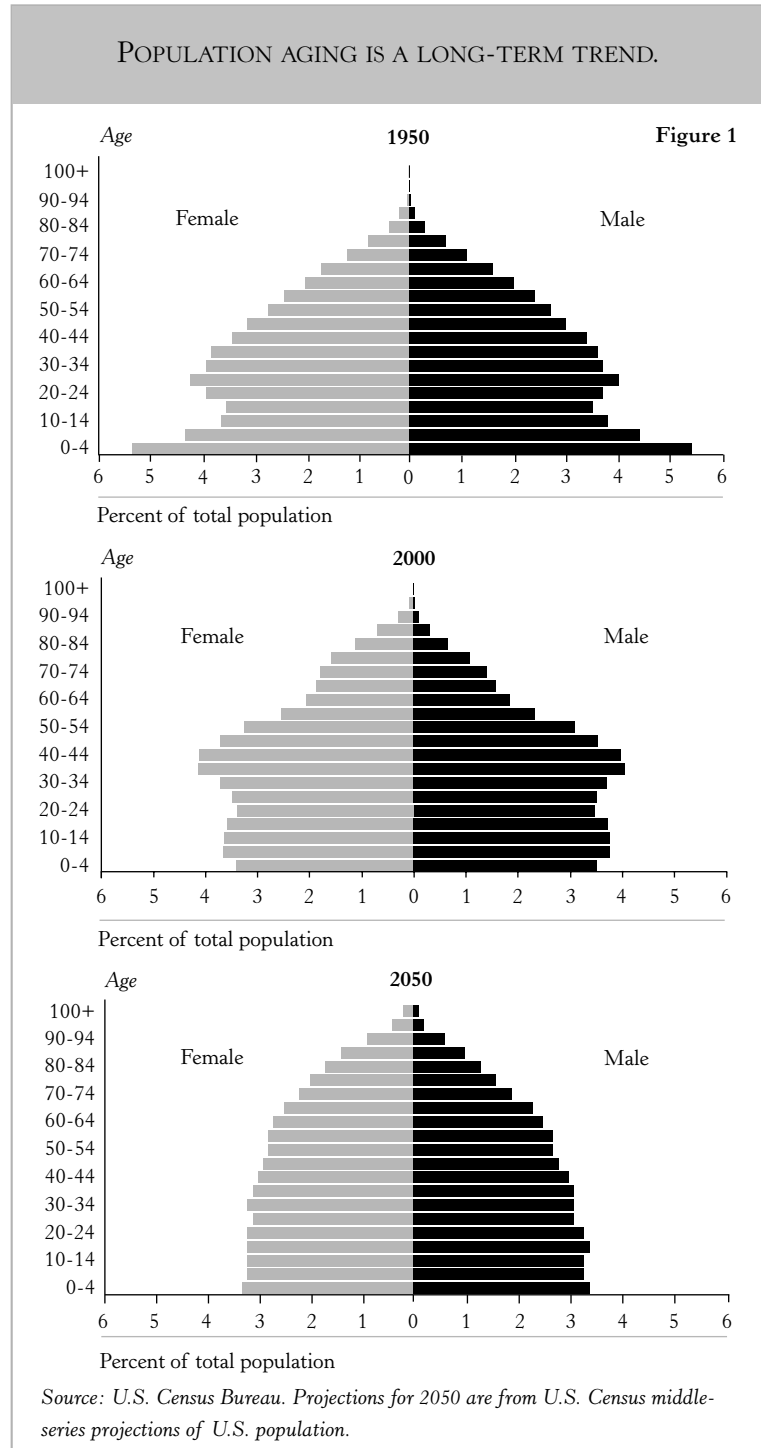
PREDICTING POPULATION AGING

The aging of the U.S. population is often discussed as though it were a consequence only of the impending retirement of the baby boom generation. But the trend is already well underway, and will continue for most of this century.

Figure 1 shows age pyramids for the United States in 1950 and 2000, as well as U.S. Census Bureau projections for the year 2050. The country has already begun to move from the pyramidal shape of 50 years ago, in which the youngest cohorts were larger than older ones, to the more cylindrical shape of the future, in which age cohorts are of roughly equal size and the population is no longer growing. The age structure is changing because fertility has been lower in recent decades than in the past and because longevity increases as mortality continues to fall. It is impossible to be sure that these trends will continue, since uncertainty is inherent in population projections (see Box 1). Nevertheless, demographers use a set of assumptions about fertility, mortality, and immigration to create forecasts of population and age distribution for coming years.

FERTILITY

When fertility is high, each new generation is larger than the preceding one, and the



population grows. Since the older population was born many years ago, at birth it was small relative to current generations, and therefore makes up a relatively small part of the population. When fertility falls below the replacement level of around 2.1 births per woman, as it has in Russia, Spain, Italy, Germany, China, Taiwan, Korea, and many other countries, then the process begins to work in reverse: The proportion of the

elderly rises as population growth rates fall.

The future course of fertility in the United States will profoundly affect population aging. The United States has always had high fertility relative to other industrialized countries. At the rates prevailing in the year 2000, the average American woman would have 2.1 births during her lifetime, just enough to keep the population size stable in the long

run if there were no immigration. The U.S. rate is much higher than the birth rates in Europe, where women average only 1.4 births. According to surveys, women in the United States and Europe continue to say they would like to have an average of about two children. On balance, there is no reason to expect U.S. fertility rates to fall to current European and Japanese levels.

Some demographers believe that fertility rates in the U.S. population will increase as the country's ethnic composition changes. Non-Hispanic whites currently make up 74 percent of the population, but the Census Bureau projects that this share will decline to 50 percent by 2060, as a result of continuing immigration and the relatively high fertility of ethnic minority women. But fertility rates are falling rapidly in the Latin American and Asian countries from which most U.S. immigrants come, and immigrant families' fertility rates drop dramatically in the first generation after immigration. It is likely that future immigrants will have substantially lower fertility than do current immigrants, eventually translating into lower birth rates for the native-born ethnic minorities as well. Overall, U.S. fertility rates are unlikely to rise to the current fertility levels of minorities and immigrants (see Box 2, page 5, for more on immigration's effect on the cost of population aging).

Fertility will probably remain close to or slightly below current levels, in line with projections made by the Social Security Administration. But fertility forecasts are highly uncertain, and this uncertainty needs to be factored into demographic projections and arguments about their implications for public budgets.

Box 1

HOW DOES UNCERTAINTY AFFECT POPULATION FORECASTS?

Models of demographic change must take into account the uncertainty surrounding estimates of trends in fertility, mortality, and immigration, the components of population change. Uncertainty about economic variables, especially productivity growth, which governs the long-run growth of real wages, further affects projections for the trust funds. How the uncertainty is presented in discussions of forecasts is important not just for actuaries but also for policymakers. There is evidence that the methods most commonly used in official forecasts understate the uncertainty, leaving politicians even more in the dark than they realize.

Official forecasts typically indicate uncertainty by providing alternative forecasts that use high and low assumptions for the major components of population change. This method has serious problems: It cannot identify the probability that real trends will fall within the high-low range; constructing the high-low ranges requires arbitrary assumptions about how to combine high and low trajectories for fertility and mortality; the trajectories for variables assume that each will always be high or always be low; and so on.

Lee and Tuljapurkar, whose forecasting methods for population and for government budgets avoid many of the problems of conventional scenario-based forecasts, find a surprisingly broad range of possible paths for the dependency ratio that can be produced with plausible combinations of future demographic rates. The Lee-Tuljapurkar estimates range from 30 to 55 older adults per 100 working-age people in 2050 and from 30 to 80 per 100 in 2080, suggesting that the old-age dependency ratio could quadruple within the lifetime of individuals born this year.

There is only one chance in 20 that the true path would fall outside this range. Many bettors would happily accept worse odds and focus only on the narrower range of possibilities, but policymakers and voters should be aware that they are not covering all the bets if they do so.

MORTALITY

Life expectancy in the United States now averages 77 years (74 for men and 80 for women), and mortality is declining rapidly in most areas outside of sub-Saharan Africa and eastern Europe and the former Soviet Union. Some analysts believe that life expectancy in the leading industrialized nations may be approaching biological limits, and that the rate of improvement will slow or stop in coming decades. However, mortality in most industrialized nations continues to decline rapidly, particularly at the older ages. Life expectancy in some countries, such as Japan and Sweden, is three or four years higher than in the United States, and mortality also continues to decline rapidly in these countries. If long-term rates of improvement continue, U.S. life expectancy will rise from its current 77 years to 86 by 2075, and to around 88 by the end of the century. Such forecasts are more consistent with those of the Census Bureau than with those of the Social Security trustees, who foresee somewhat slower gains in longevity.

As with fertility, there is considerable uncertainty about the forecasts of mortality. Several recent reviews have found that official projections in Europe, the United States, and Japan have consistently underestimated the improvement of mortality rates—and thus the growth of the elderly population. Research done by Shripad Tuljapurkar and colleagues and by Ronald Lee and Timothy Miller suggests that this pattern of underestimation is continuing, raising the possibility that the costs associated with aging populations may be greater than official fiscal projections suggest.

Much of the progress in reducing mortality in the last century was due to the eradication of childhood diseases and, more recently, to declining rates of mortality due to heart disease and stroke. But not all demographers and epidemiologists believe that the rapid pace of gains in life expectancy can continue. Pessimists point to the multiple infirmities of old age and the resurgence of infectious diseases.

DEPENDENCY RATIOS

The age distribution of a population is often summarized in terms of dependency ratios, which reflect the general expectation that children (those below age 18, according to the Census Bureau's definition) and older persons (usually defined as those at least 65 years old) are economically inactive, while those in between are economically active, creating the goods and services that we all consume. Of course, it is simplistic to characterize both young and old as dependents; many are working and earning. And many of those in "working ages" are not in the labor force: Most people now retire before age 65. Women's participation in the labor force has increased dramatically in recent decades, but men's participation has decreased. Dependency ratios based solely on the proportion of people in different age groups do not capture these changes in work patterns.

The Census Bureau expects the old-age dependency ratio (the number of persons age 65 or older per 100 people ages 19 to 64) to grow from its current level of about 21 per 100 to 36 per 100 in the next three decades before leveling off. That is, instead of

there being nearly five persons of working age for each older person, there will be fewer than three. Given slightly different but still plausible assumptions about mortality and fertility, this ratio could continue to worsen through most of the century.

The same long-term decline in fertility rates that led to a growing old-age dependency ratio also produced a lower youth dependency ratio. In 1960, at the height of the baby boom, the ratio of children under 18 to the working-age population was 65 per 100. It has since fallen to 41 per 100, and the Census Bureau projects that the ratio will remain about constant for the next 50 years: There will be just under two working-age adults for every person under 18. The decline in youth dependency brings some relief to public budgets, although nowhere near enough to offset the increased pressure due to growth of the older population. The overall ratio of the dependent-age population to the working-age population has fallen, from a high of 82 per 100 in 1960 to 62 per 100 in 2002.

These dependency ratios provide some idea of the effect that demographic change has on the economy as a whole, but the effects on the federal budget are a different matter. Public education, the main age-specific program that benefits children, is funded mainly by state and local governments. Medicaid, the mixed federal-state health care program for the poor, spends far more per person on older beneficiaries than on child beneficiaries. The federal budget is affected more directly by the growth of the old-age population than it is by the decrease of the child population.

IS IMMIGRATION THE SOLUTION TO POPULATION AGING?

There are over 6 billion people in the world, 96 percent of whom live outside the United States. Many of them would move to the United States if there were no restrictions on immigration. Could some reasonable level of immigration resolve the country's long-term fiscal imbalances? Could painful choices about entitlement programs be avoided using different choices about immigration policy?

The United States already receives the largest number of immigrants in the world. Immigration helps account for the fact that the U.S. population is still growing, and aging slowly, when many European populations have already started to decline. New immigrants and their descendants will account for about two-thirds of the projected growth of the U.S. population expected during the first half of the 21st century, and will help slow the aging of the U.S. population.

Many attempts have been made to estimate the fiscal impact of immigration, which not only generates demand for public education, health care, and other services, but also expands the tax base and slows the aging of the population. Some economists rely on cross-sectional estimates, using current data on immigrant households to compare benefits received from the government at all levels and taxes paid this year. But to investigate the long-term fiscal impact, analysis must take into account the expected payments over the life of an immigrant, and even the lifetimes of the immigrant's children and grandchildren.

According to a study panel under the auspices of the National Academy of Sciences, the long-term impact of a newly arrived immigrant turns out to depend greatly on the immigrant's age at arrival. An average 20-year-old has many years in which to work and pay taxes before reaching the age when individuals typically receive more from the government than they pay in taxes. A 50-year-old, by contrast, is expected to work for only a few more years before becoming a net consumer of government services. The long-term impact also varies significantly with the immigrant's education: Those with more education are likely to pay

higher taxes during their working years, and the benefits they receive from government are not proportionately higher.

In a recent update of estimates prepared for the panel, Ronald Lee and Timothy Miller found that each additional immigrant with characteristics (such as age, education, and family size) typical of recent immigrants has a "net present value" of \$46,000. That is, a new immigrant's impact over the next 75 years is expected to be equivalent to a one-time investment of \$46,000. But Lee and Miller estimate that the country would need to admit an additional 5 million immigrants per year, quintupling the current level of immigration, in order to achieve long-term balance in the Social Security trust fund. A recent report from the United Nations Population Division reached a similar conclusion for European countries, announcing that even much larger migration flows than are currently permitted would not counterbalance the effects of population aging.

To maintain the 2000 ratio between the working-age population (people between the ages of 20 and 64) and the older population (people ages 65 and older), the United States would need roughly 95 million more working-age persons in 2025, in addition to those already expected at current levels of immigration. In other words, if the entire working-age population of Mexico were to move to the United States in 2025, there still would not be enough people to restore the old-age dependency ratio of 2000.

The United States could adopt an "accelerated brain-drain" policy, as Canada and Australia have, admitting a much higher proportion of well-educated, highly skilled immigrants who are already well-off or likely to become so. For any given volume of immigration, such a strategy would have the greatest impact on public budgets, since the richer immigrants would pay more in taxes without consuming proportionately greater benefits. But such a move would mark a radical shift in U.S. policy, reversing a fundamental decision made in 1965 to assign priority to close relatives of U.S. citizens and legal residents.

WHICH PROGRAMS WILL AGING AFFECT?

Figure 2 illustrates how the aging of the population is putting pressure on public budgets. The top illustration plots the combined (federal, state, and local) average benefits Americans receive at each age. Age-neutral programs, such as defense, police, and roads, are allocated proportionally to the members of each age group. The distinctive rises visible at either end of the life cycle are caused by age-specific programs, such as education and Social Security. The illustration shows that the elderly receive more public benefits than does any other age group. Public spending on children is much lower, since most of the cost of raising children is borne privately.

The bottom illustration shows the difference between taxes paid and benefits received for each age. Since the population over age 65, which receives the greatest amount of government support, is growing faster than any other age group, the demographic change is going to significantly affect public finances.

Although other federal and state programs are likely to be affected by population aging, Social Security, Medicare, and Medicaid, three of the federal government's largest programs, will be the most directly affected. Social Security and Medicare are entitlement programs, which guarantee that everyone who meets the eligibility criteria is entitled to the promised payment. In contrast, discretionary pro-

grams such as education rely on annual appropriations.

SOCIAL SECURITY

Social Security, a social insurance program of the federal government, pays monthly benefits to replace incomes from wages lost when a worker retires, becomes disabled, or dies. Benefits are paid to the worker, surviving spouse, and minor children.

Social Security is financed by payroll taxes of 10.6 percent of gross salaries up to a certain limit (\$80,400 in 2001) for the Old Age and Survivors Insurance, and of 1.8 percent of gross salaries for Disability Insurance. Half of the total is charged to the employee and half to the employer. Benefits are calculated using a complicated formula that takes into account a worker's average monthly earnings over the past 35 years (adjusted by the change in average wages each year) up to the salary limit. These benefit amounts are raised each year by the estimated change in the Consumer Price Index.

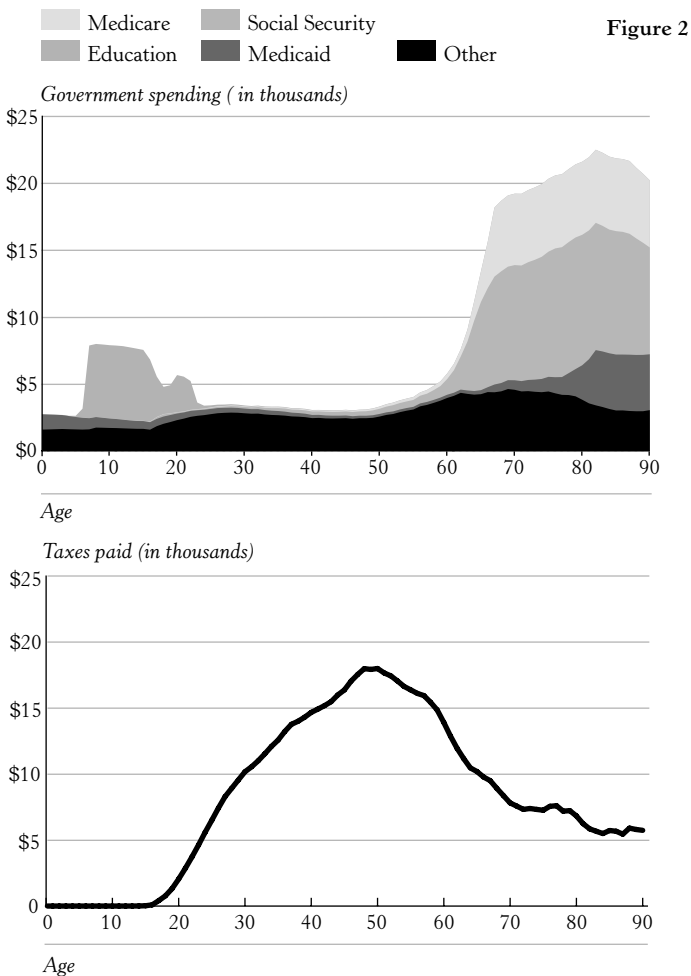
In 1962, Social Security payments amounted to 2.5 percent of gross domestic product (GDP); by 1999, they had risen to 4.5 percent of GDP. Social Security benefits provide more than 50 percent of family income for two out of three older Americans. The

Center on Budget and Policy Priorities estimated that if these benefits were not available and other sources of income did not compensate somehow, 48 percent of older Americans would have lived in poverty in 1997, compared to the actual poverty rate of 12 percent.

Each year, the Social Security Board of Trustees produces a 75-year forecast of the trust fund's revenues and expenditures. Forecasting the system's revenues and expenses involves using projections of future economic and demographic trends, and is highly dependent on the assumptions used about life expectancy, fertility, and immigration (which affect the number of workers paying into the system in future years), and real economic growth (which affects the average level of wages and thus tax revenues, and eventually the average level of benefits). The trustees deal with uncertainty by choosing high-cost, intermediate, and low-cost variants for these key variables, and then making their calculations for each of three scenarios, which are intended to bracket the actual future path.

The trustees summarize the information in these projections as the long-range actuarial deficit, the amount by which the payroll tax would have to rise, this year and all succeeding years, to make the present value of future revenues exactly equal the present value of future payments to beneficiaries

NET PAYMENTS FROM GOVERNMENT ARE HIGHEST FOR OLDER PEOPLE.



Source: Ronald Lee and Ryan Edwards, "The Fiscal Impact of Population Change," in *Seismic Shifts: The Economic Impact of Demographic Change*, ed. Jane Sneddon Little and Robert K. Triest (2001).

over 75 years. Using the intermediate assumptions, the trustees estimated the deficit as 1.86 percent; in other words, if the program were not changed, the payroll tax devoted to Old Age, Survivors and Disability Insurance (OASDI) would have to be increased permanently from 12.40 percent to 14.26 percent to achieve balance over the next 75 years.

In 1983, when the latest major reform of the Social Security system took place, actuarial balance was restored by a combination of tax increases and a gradual increase in the normal retirement age. At that time, the 75-year forecast period was split

nearly half and half between "fat years," with the baby boomers still in peak earning years, and "lean years," when most baby boomers would be retired. In 2001, the 75-year forecast period includes significantly fewer fat years and more lean years. The measures taken in 1983 restored actuarial balance, but not for all time. It is important to keep this in mind, lest earlier "failures" cause needless discouragement. In fact, the moving 75-year window could be seen as a way to build in incrementalism. If the actuarial balance were restored periodically, several presidential administrations and Congresses could claim

success, and no single generation would have to bear the full shock of the radical reform needed for truly long-term balance.

In their 2001 report, the Social Security trustees projected that, if no changes were made to the current law, the trust fund would be exhausted in the year 2038, rather than in 2034. The revisions result from a combination of changes in the methods and the economic and demographic assumptions. Although fairly small changes in the assumptions about economic growth can move the date forward or backward a few years, the qualitative conclusion has remained constant: The system is not in fiscal balance, and if the law is not changed, the trust fund will be exhausted at some point before mid-century. Resolving the imbalance will involve choices about the levels of benefits and about which generations of workers will pay for which generations of retirees.

MEDICARE

Medicare, created by amendments to the Social Security Act in 1965, provides insurance covering hospital bills and physician fees for most Americans age 65 and older. Medicare Part A, for hospital insurance, is financed from a trust fund that collects a payroll tax, split between employer and employee, of 2.9 percent of gross earnings. Medicare Part B, for physician and other services, is financed mainly by the U.S. Treasury's general fund, and to a lesser extent by monthly premiums paid by enrollees (\$50 per month in 2001).

Medicare expenditures have grown from \$7.5 billion in 1970 (equivalent to about \$35 billion in 2002 dollars, or 0.7 percent of GDP in 1970), to \$213 billion in

1999 (2.4 percent of GDP in 1999). The number of enrollees nearly doubled, but expenditures per enrollee quadrupled (adjusting for inflation).

Projecting Medicare expenditures far into the future is extraordinarily difficult. In addition to the economic and demographic uncertainties that affect Social Security projections, there is uncertainty about the growth of costs per beneficiary. Costs may rise as medical technology makes costly new interventions available, or they may slow due to the population's better health and because costs are being controlled by managed care.

The intermediate assumption adopted by the trustees of the Medicare trust funds in the 2001 report was more pessimistic about continued cost growth than it was in previous years, and assumes that cost growth in health care will slow down but will remain one percentage point higher than the growth rate of real wages.

In essence, long-range budget forecasts assume some success in controlling health care costs: Costs will grow more slowly than in the 1990s but will still grow more quickly than the economy as a whole. This assumption about slowing cost growth is built into budget projections, but the difficult choices needed to restrain cost growth have yet to be made.

MEDICAID

Medicaid was created in 1965, at the same time as the Medicare program. The federal portion is financed by the general fund of the U.S. Treasury, and the state portion by state general funds.

Medicaid is not only the government health program for poor

people, it is also the largest source of payment for long-term care of the disabled and older people: Nearly 70 percent of nursing home residents are covered by Medicaid. Payments for nursing home care are the fastest-growing component of the program, representing 35 percent of overall spending. The second-largest source of payment for nursing home care is out-of-pocket payments by residents and their families (in 1998, 20 percent of all long-term care and 12 percent of nursing home care). Medicare also pays for short-term care in skilled nursing facilities and for some home health care and

community-based long-term care. Private long-term care insurance is still scarce and expensive.

In 35 states and the District of Columbia, people can qualify for Medicaid coverage if they are "medically needy"; that is, if their assets are below a specified level and if the "reasonable cost" of a nursing home exceeds their annual income minus a small amount for personal expenses. Nondisabled spouses living in the community can keep some protected income and assets, in amounts varying by state, to avoid impoverishment and loss of a house.

Box 3

HOW DOES THE UNITED STATES COMPARE TO OTHER COUNTRIES?

The United States is far from alone in dealing with an aging population, and the share of population ages 65 and older is actually higher in many countries than it is in the United States. Most European nations have more generous public pension plans, and most already have higher rates of taxation, especially payroll taxation, than does the United States. They face more difficult and immediate problems adjusting to population aging. The exception is the United Kingdom, where major reforms in the 1980s reduced the gap between revenues and promised benefits to a point below that of the United States.

The table shows the percentage of the population ages 65 and older in 2000 and 2025 for the United States and its five largest trading partners. Germany and Japan have older populations than the United States, mainly because of persistently lower fertility rates. China still has a younger age distribution than the United States does now, but its population will age very rapidly in the first half of the 21st century because of recent rapid fertility declines and gains in life expectancy.

Country	Percent of population ages 65 and older	
	2000	2025 (projected)
Canada	12	21
Japan	17	28
Mexico	5	9
China	7	14
Germany	16	23
United States	13	18

Sources: Population Reference Bureau, World Population Data Sheet, 2000; and U.S. Census Bureau, International Database.

AGING AND THE BUDGET

The Congressional Budget Office (CBO) produces long-range budget projections for the federal government, testing the implications that various assumptions about demographic change and economic growth might have on current programs' affordability. The CBO's October 2000 report included a midrange projection that Social Security, Medicare, and the federal portion of Medicaid would account for 16 percent of GDP by 2040. (For comparison, all federal outlays in 2000 accounted for 18.2 percent of GDP, with Social Security, Medicare, and the federal portion of Medicaid accounting for 7.5 percent.) This would increase to 20 percent of GDP if health care costs continue to grow at their recent rate during the next few decades, rather than slowing as the Medicare trustees assume. These calculations do not allow for any changes in benefits, such as a prescription drug benefit in Medicare or extra contributions for individual retirement accounts, which many in Congress and the public have supported.

The CBO estimates cover only federal spending. Based on the data in Figure 1 (page 2), it is possible to calculate that the change in the population age distribution alone would mean that taxes at all levels (federal, state, and local) would have to be 34 percent higher in 2075 than they are now in order to provide the package of government benefits provided in 2000.

More complicated but more realistic forecasts would allow for increasing productivity growth, which will cause the generosity of benefits to change and will raise tax revenues. Combining estimates of increased productivity growth with forecasts of population and interest rates (which affect the interest on trust funds and government debt) makes it possible to produce forecasts of future government taxes and expenditures. Ronald Lee, Ryan Edwards, and Shripad Tuljapurkar project that spending on programs for older people will rise from approximately 8.5 percent of GDP in 1997 to 22.5 percent of GDP in 2070. But the 95 percent confidence interval for the estimate in the year 2070 ranges from 12.0 percent to 34.0 percent. The wide range shows that the official estimates based on intermediate assumptions are misleadingly precise; prudent policy ought to be ready for a wide range of possibilities, rather than declaring a crisis or pronouncing it solved based on the middle estimate alone.

In most of the possible scenarios, the cost increase is driven more by rising health care and long-term care costs than by rising Social Security benefits. Clearly, the fiscal problems posed by an aging population reach beyond the frequently mentioned "Social Security crisis."

Ronald Lee and his colleagues have calculated that the implied

payroll tax for OASDI would have to rise from 12.4 percent in 2000 to over 21.0 percent in 2070 in order to keep the trust funds in balance. These are estimates for a pay-as-you-go system, in which the payroll tax is raised each year exactly enough to pay the following year's benefits. If the payroll tax rate were raised sooner in anticipation of the demographic changes, and if the additional surplus were kept in the trust funds, a much smaller increase would be required to balance the system.

Future trends in disability rates greatly affect cost projections for all three programs. Since disability rates rise with age, trends in disability at older ages are particularly significant for public finances. There is some variation in how different surveys measure disability, but several independent surveys have shown declines in disability rates. Kenneth Manton and XiLiang Gu have estimated that, if disability rates had not declined from the 1982 levels, the elderly disabled population in 1999 would have been 9.3 million people instead of 7.0 million people. The number of older people who are disabled is still growing, because the older population as a whole is growing, but the trend toward lower disability rates will, if it persists, mitigate the effect that population aging has on public budgets.

FAIRNESS BETWEEN GENERATIONS

Since Social Security and Medicare began to pay out benefits (in 1940 and 1965, respectively), their generosity, coverage, and cost per enrollee have all increased. These programs have greatly increased spending on the elderly. Currently, age-specific government expenditures on people over age 65 are 3.9 times higher than expenditures on children under 18. Both Social Security and Medicare were particularly generous to the first generations of beneficiaries, who paid payroll taxes for relatively short proportions of their working lives and then qualified for benefits for long periods after retirement or age 65. There are various estimates of how much the value of the benefits paid or promised to those already eligible exceeds the value of the taxes they paid (including interest earned on the trust fund balances). But the estimates amount to an implicit national debt approximately equal in size to the (visible) national debt. One estimate for the Medicare system alone is that current workers will have to pay about \$2.5 trillion to make good on promises to early cohorts of beneficiaries.

The unfunded liabilities complicate any calculation of the “return” on Social Security payments for younger workers, which may look low compared to what is available from competing investments. But these calculations can be misleading for two reasons.

First, the calculations typically do not include each current worker’s share of what has to be paid to make good on the promises to current retirees and Medicare beneficiaries. Unless the nation is simply to default, which no one seriously proposes, the money has to come from somewhere (either payroll taxes, as in the current system; other taxes; or government borrowing). It is misleading to contrast the actual rate of return on Social Security payments (which includes current workers’ share of benefits given to older generations) with a rate of return on private investments, which do not include that share.

Second, Social Security is not precisely comparable to most pensions or annuities: It provides disability and survivors’ insurance as well as a pension, and it includes redistribution to lower-paid workers. If workers did not pay for these portions of the program through their payroll taxes, they might need to buy more disability insurance from private insurers, and pay for some tolerable level of transfers to the low-income elderly through other taxes.

The effect of the rise of transfers to the elderly population can be seen in Figure 3. The dramatic decline in poverty at older ages is largely attributable to the expanded coverage and increased generosity of benefits of the Social Security program, which provides two-thirds of Americans age 65 or over with more than half

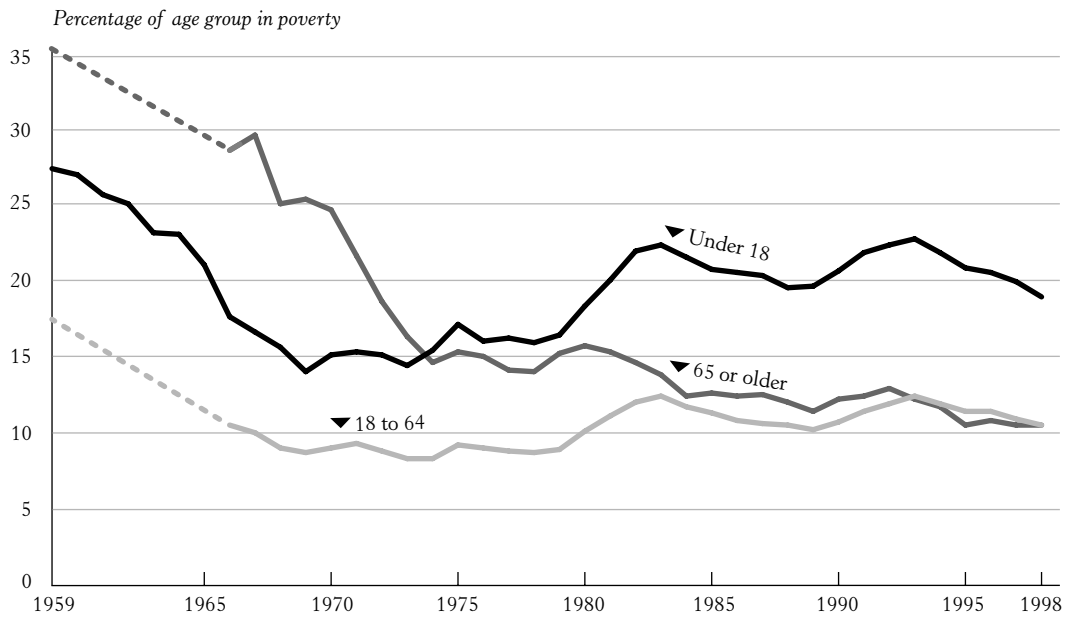
their total income. As recently as 1959, poverty rates for older Americans were the highest of the age groups shown; more recently, children are the group most likely to be living in families with incomes below the poverty line.

Poverty rates are calculated by comparing a current year’s income with a poverty line that is based on a modest standard of living. Many older people with incomes sufficient to keep them above the official poverty line must nevertheless live with considerable economic uncertainty because they have accumulated very little wealth through savings, home ownership, and investments, and because they must pay for medical care not covered by insurance. The average net worth of households headed by older people has increased over time, but there is significant variation in accumulated assets among older people, even more than in incomes.

A simple comparison of poverty rates by age (Figure 3) with public spending by age (Figure 2, page 7) might suggest that fairness dictates a revamping of the age structure of public spending. But notions of intergenerational equity are too diverse for such a simple comparison. For one thing, Figure 2 shows only transfers through the mechanism of government. Monetary transfers within the family, such as gifts, allowances, bequests, and provision of food, clothing, shelter, health care, and education, are

POVERTY RATES HAVE FALLEN FASTEST FOR OLDER PEOPLE.

Figure 3



Note: Dashed lines indicate years for which data are not available.
 Source: March Current Population Survey.

hard to measure, but their value in the aggregate is comparable to that of transfers through the public sector. The private-sector transfers tend to flow from older to younger people.

A second caveat is that a large proportion of the public spending on older people consists of payments that the government makes to providers of health care or nursing home services; the payments are made on the behalf of the older person, who probably would prefer not to need the service. This is a different situation from the government writing a check for the beneficiary to use as he or she sees fit.

People who are currently retired or who are nearing retirement have made their decisions about savings, pensions, and health insurance using assumptions based on the current Social

Security and Medicare systems. Social insurance displaces private savings to some extent, although the exact amount is a subject of long-standing debate among economists. Sudden changes in programs would give older people little or no time to adapt to the new situation by saving more or buying more insurance. It would be preferable to change the rules only for younger workers, who have plenty of time to adapt; the country should not wait for a crisis before reforming social insurance programs.

These considerations of fairness between generations are mixed in with considerations of fairness between other groups. For example, immigrants are much younger and have higher fertility rates than native-born, non-Hispanic whites, so educating immigrants' children costs tax-

payers a disproportionately large amount. Less often noted, however, is the fact that immigrants transfer more than \$10 billion per year through the Social Security system and Medicare to elderly non-Hispanic whites, by paying more in payroll taxes than they collect in benefits. Box 4 (page 12) provides more detail about the redistributive (within-generation) effects of one program, Social Security.

IS THE CURRENT SYSTEM FAIR TO WOMEN AND MEMBERS OF RACIAL AND ETHNIC MINORITIES?

The Social Security system was not designed solely, or even explicitly, to redistribute income from high earners to low earners. President Roosevelt emphasized that it was based on social insurance principles, meaning that benefits are related to past contributions, not to current need. Proponents of the system have always emphasized that Social Security payments are meant to complement, not replace, other sources of retirement income, such as personal savings and private pensions.

Social Security payments to retired workers and survivors are progressive in the sense that they reduce the gap between the incomes of high- and low-wage workers. For example, someone with a salary near the maximum for Social Security taxes (currently \$80,400) earns about seven times as much as a minimum-wage worker, and would have payroll taxes seven times as high as those of the low-wage worker. But the Social Security retirement benefits for someone who had consistently earned at the higher wage would be only three times as high as those of someone who had consistently earned the minimum wage.

Although Social Security has been among one of the country's most successful antipoverty programs, some people have argued that the current system is flawed, particularly in how it treats women and members of racial and ethnic minorities. Because women and minorities earn less, on average, they are more likely to be favored by the progressive benefit structure. But the average benefits for women are still lower than those for men because of past differences in wages. The average monthly benefit for retired workers in December 2000 was \$928 for men and \$696 for women.

But looking at the figures for just one month can be misleading. Women tend to live longer than men: A 65-year-old white woman retiring in 2002 can expect to collect about 27 more monthly checks during her life than a 65-year-old white man, who in turn can expect about 20 more checks than a black male retiree. Does fairness demand that the same record of contributions lead to the same monthly check, or to the same expected lifetime benefits?

Another aspect of fairness comes into play if racial and ethnic groups are considered across generations. Because blacks have a higher fertility rate and lower life expectancy than non-Hispanic whites, and because the Hispanic population includes a high proportion of immigrants, who tend to be younger than the native-born population, both blacks and Hispanics tend to be younger than non-Hispanic whites. In other words, whites are over-represented in the retirement-age population, while blacks and Hispanics are over-represented in the generation now in its early working years. As currently designed, the system's rate of return (the present value of future benefits compared to expected contributions) is declining over time, making the system less valuable for blacks and Hispanics, not because of their race or ethnicity, but because they are more likely to be young.

Older women face a variety of problems in maintaining their standard of living once they retire. They are more likely than older men to live in households with incomes below the official poverty line. In addition, women are less likely to have their own private pensions than are men, and the pensions they do receive are worth less on average, although women's increased participation in the labor force and the changeover from defined benefit to defined contribution pension plans should help reduce the difference in the future.

Although most of the discussion about gender equity has dealt with Social Security, it is an issue for the other old-age support programs as well. The precarious situation for financing the long-term care of disabled elderly people has a particular bearing on income security for older women. Older women who had to put a disabled husband in a nursing home or pay for expensive home care are often left with few assets after their husband's death. Women tend to be married to somewhat older men, and they live longer, on average, than their husbands. Women are thus particularly likely to benefit from any improvements in the current situation for long-term care, whether it comes from a long-term care benefit in Medicare, changes in Medicaid, or a stronger private insurance market.

A SPECTATOR'S GUIDE TO ENTITLEMENT REFORM

Social Security and Medicare reform proposals were important topics of debate in the 2000 presidential campaigns, and they are likely to be prominent on the congressional agenda for some time to come. In December 2001, a bipartisan commission appointed by President George W. Bush produced three separate sets of recommendations for Social Security alone, focusing mainly on providing or encouraging individual retirement accounts. A complete set of solutions to the fiscal problems caused by population aging across the board will take a great deal more work.

This guide does not offer detailed proposals, but it does offer suggestions for evaluating the detailed proposals that emerge from the political process.

POPULATION AGING IS NOT JUST A SOCIAL SECURITY PROBLEM.

Social Security is expected to grow mainly because of the increase in the number of older people. Medicare is expected to grow both because of the increase in the older population and because of the continued increase of health care expenditures per person (although the extent of the increase is difficult to predict). Projections of Medicaid's growth are based on the proportion of the older population expected to need care and on the proportion who will rely on family members or care in the community, although those numbers are hard to predict. At present, Medicare expenditures are just over half as large as Social Security expenditures. By 2030, when most baby boomers will be retired, the two programs will be about the same size, even under CBO's assumption of slower growth in health care costs.

Sometimes it pays to keep problems separate, but since decisions made about any of the three programs (Social Security, Medicare, and Medicaid) can have major consequences for older people, reforming all three at once could permit more compromise and coordination. As population aging speeds up, reforming the social insurance system becomes more urgent.

RESTORING THE BALANCES IN TRUST FUNDS IS NOT THE ONLY GOAL.

Each year, the Social Security trustees present their findings in terms of the estimated actuarial balance for a period 75 years into the future. For the funds to be in exact balance, the discounted value of all the expected payments into the fund during the next 75 years would have to equal the discounted value of all expected benefits to be paid out of the funds. The 2001 trustees' report projected that the benefits would exceed the taxes paid in by 1.86 percent of total payroll. But even if the funds were in balance, the system would need further reform. Surplus years are expected early in the 75-year period, but the system would be in deficit in all the later years. To build up the trust funds enough to make them sustainable for the rest of the century and beyond would require a payroll tax increase of between 3 percent and 6 percent, not 1.86 percent.

The Social Security and Medicare trust funds have been running surpluses in recent years, as members of the large baby boom generation are in peak earning years and most beneficiaries are members of the much smaller Depression and World War II generations. The surpluses are, by law, invested in interest-bearing obligations of the government, and the interest counts as revenue in future years. In essence, the assets of the trust funds are promises from the government to pay for future benefits in future years. Proposals to put the surplus in a "lockbox" are adding another promise to the ones already made in the entitlement law and the bond obligation. Promises are credible if there is reason to believe that future Congresses and presidents will feel bound by them. Past attempts to cap discretionary spending at the federal level suggest that no single Congress can do much to take fiscal policy out of the hands of its successors. It is not clear why future retirees should feel more secure if a lockbox provision were added, or less secure if it were not.

Some reform plans would allow part or all of an individual's contributions to be invested in private assets, such as equity stocks or money market funds.

(continued on next page)

Such privatization would entail a break from the pay-as-you-go tradition. If there were complete privatization, an individual's benefits would depend on the amount of her or his contributions and the investment performance of the assets chosen. Each generation, in principle, would take care of its own retirement, rather than relying on succeeding generations of workers. Partial privatization would entail some residual guarantee of a minimum benefit payment to each retiree, whatever the performance of his or her investments.

Privatization would mean that future retirees would draw their incomes from dividends and interest paid by companies and financial institutions. This method of payment might be more palatable to future workers, since it would look more like something owned by future retirees than something promised to them in the past by the government. Nevertheless, the basic demographic problem remains: In the future a larger proportion of the population will not be working to produce goods and services, but will still have a claim on those goods and services.

Reforms' effects on the economy will depend on their impact on savings and investment, thus affecting the size of the economy from which both retirees and workers will derive income, and what they do to redistribute income. If privatization or matching savings plans increase the proportion of national income that is saved and invested, they may increase the growth rate and thus make future retirement and health care programs more affordable. But if they simply divert funds people would have saved anyway into different channels, the overall effect on the real economy would likely be small.

REFORM PROPOSALS SHOULD CONSIDER THE 'TRANSITION GENERATION.'

One of the biggest challenges faced by reformers, particularly those proposing partial or complete privatization, is figuring out how to manage the transition so that one generation does not end up being caught in the middle, paying for current retirees as well as financing its own future retirement.

People born between 1875 and 1915 received a large gift from future generations through Social Security, because when it was implemented it began paying out benefits to retirees who had not been paying into the system for very many of their working years. This bonus to the early generations amounted to a 4 percent or 5 percent increase in their lifetime wealth. The transfer was financed by a small loss imposed on people born after 1935, rising to several percent of lifetime wealth for those born

today, and increasing as the population ages. If Social Security were privatized, many people born after 1935 would face a significant loss of lifetime wealth, but those who are now early in their working careers or not yet working would spend most of their careers in the new system and would see a much smaller loss. If each cohort of voters acted only in their own self-interest, those currently over age 50 would probably be neutral about privatizing Social Security, most of the working-age population would be opposed, and the very young would be in favor.

Although there is controversy about exactly how high the bill for the transition would be, most economists agree that there would be some costs, which should be compared to the promised benefits.

BOTH FAIRNESS AND ACTUARIAL BALANCE SHOULD BE CONSIDERED.

Discussions of entitlement reform are complicated because there are several possible approaches to reform, involving various combinations of increases in revenues or decreases in benefits. Social Security benefits could be decreased if a lower estimate of the cost of living were used to index benefits, if the ages of eligibility for full or partial retirement benefits were increased further, or if a means test were set for all or part of the benefits. Medicare expenditures could be lowered or targeted by paying less to providers for some services, by reducing the number of services paid for, or by raising premiums or copayments for some or all beneficiaries. Revenues could be increased by raising the payroll tax rate, by raising the upper limit on salaries taxed for Social Security, or through some other device. Political feasibility, equity, and efficiency may require a complex mix of these basic approaches.

Adding coverage of prescription drugs to the Medicare program or matching private savings for retirement may be among the most popular ways to allocate the country's growing wealth. But voters and elected officials should know that the number of beneficiaries is about to grow rapidly and that there is no clear idea where the growth will end. And the nation should know about costs and benefits of alternate uses of funds, including programs for older people, programs for younger people, and programs that are age-neutral.

Additional Reading and Sources

PUBLICATIONS

Henry Aaron and Robert Reischauer, *Countdown to Reform: The Great Social Security Debate* (New York: Century Foundation Press, revised and updated for 2001).

Federal Forum on Aging-Related Statistics, “Older Americans 2000: Key Indicators of Well-Being,” accessed online at www.agingstats.gov/chartbook2000/default.htm, on March 14, 2002.

Robert B. Helms, ed., *Medicare in the Twenty-First Century: Seeking Fair and Efficient Reform* (Washington, DC: American Enterprise Institute, 1999).

Kaiser Commission on Medicaid and the Uninsured, “Long-Term Care: Medicaid’s Role and Challenges,” accessed online at www.kff.org/content/2000/2172/LongTermCare.pdf, on March 14, 2002.

Kevin Kinsella and Victoria A. Velkoff, “An Aging World: 2001,” U.S. Census Bureau Series P95/01-1, accessed online at www.census.gov/prod/2001pubs/p95-01-1.pdf, on March 14, 2002.

Ronald Lee and Jonathan Skinner, “Will Aging Baby Boomers Bust the Federal Budget?” *Journal of Economic Perspectives* 13, no. 1 (1999): 117-40.

Robyn I. Stone, “Long-Term Care for the Elderly with Disabilities: Current Policy, Emerging Trends, and Implications for the Twenty-First Century,” accessed online at www.milbank.org/0008stone/index.html, on March 14, 2002.

WEBSITES

AmeriStat, www.ameristat.org

Centers for Medicare and Medicaid Services, <http://cms.hhs.gov>

Congressional Budget Office, www.cbo.gov

National Academy on Social Insurance, www.nasi.org

Social Security Administration, www.ssa.gov

U.S. Census Bureau, www.census.gov

Urban Institute, www.urban.org

SOURCES FOR CALCULATIONS

Center on Budget and Policy Priorities, “Social Security and Poverty Among the Elderly,” accessed online at www.cbpp.org/4-8-99socsec.pdf, on March 14, 2002.

Congressional Budget Office, “The Long-Term Budget Outlook,” accessed online at www.cbo.gov/showdoc.cfm?index=2517&sequence=0&from=1, on March 14, 2002.

Ronald Lee, “Probabilistic Approaches to Population Forecasting,” in *Rethinking Population Projections*, ed. Wolfgang Lutz, James Vaupel, and Dennis Ahlburg. Supplement to Vol. 24 of *Population and Development Review* (1999): 156-90.

Ronald Lee and Ryan Edwards, “The Fiscal Impact of Population Change,” in *Seismic Shifts: The Economic Impact of Demographic Change*, ed. Jane Sneddon Little and Robert K. Triest. Conference series no. 46 (Boston: Federal Reserve Bank of Boston, 2001).

Ronald Lee and Timothy Miller, "Immigration, Social Security, and Broader Fiscal Impacts," *American Economic Review: Papers and Proceedings* 90, no. 2 (2000): 350-54.

Ronald Lee and Shripad Tuljapurkar, "Population Forecasting for Fiscal Planning: Issues and Innovations," in *Demography and Fiscal Policy*, ed. Alan Auerbach and Ronald Lee (New York: Cambridge University Press, 2000).

Ronald Lee, with the assistance of Timothy Miller, "Population Age Structure, Intergenerational Transfers, and Wealth: A New Approach, with Applications to the United States," *Journal of Human Resources* 29, no. 4 (1994): 1027-63.

Kenneth Manton and XiLiang Gu, "Changes in the Prevalence of Chronic Disability in the United States Black and Nonblack Population Above Age 65 from 1982 to 1999," *Proceedings of the National Academy of Sciences* 98, no. 11 (2001): 6354-59.

James Smith and Barry Edmonston, eds., *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration* (Washington, DC: National Academy Press, 1997).

Shripad Tuljapurkar, Nan Li, and Carl Boe, "A Universal Pattern of Mortality Decline in the G7 Countries," *Nature* 405, no. 6788 (2000): 789-92.

Deborah Roseveare, Willi Leibfritz, Douglas Fore, and Eckhard Wurzel, "Ageing Populations, Pension Systems, and Government Budgets: Simulations for 20 OECD Countries," *Economics Department Working Papers*, no. 168 (Paris: Organisation for Economic Co-Operation and Development, 1996).

United Nations Population Division, *Replacement Migration: Is It a Solution to Declining and Ageing Populations?* (New York: United Nations, 2000).

PRB REPORTS ON AMERICA
is published by the Population
Reference Bureau, in Washington,
D.C. PRB is the leader in providing
timely and objective information on
U.S. and international population
trends and their implications.

© Copyright 2002 Population
Reference Bureau, Washington, DC.
ISSN 1522-8304

Peter J. Donaldson
President

Ellen Carnevale
Director of Communications

Helena Mickle
Managing Editor

Theresa Kilcourse
Cover design

Tara Hall
Production

EDITORIAL AND CIRCULATION OFFICES

Population Reference Bureau
1875 Connecticut Ave., NW, Suite 520
Washington, DC 20009
Phone: (202) 483-1100
Fax: (202) 328-3937
E-mail: popref@prb.org
Website: www.prb.org

Reprint Permission:
For permission to photocopy or reprint
portions of this report, please contact PRB.

Address Changes:
Contact PRB to change address or to be
added to the mailing list.

PRB MEMBERSHIP

Membership in PRB will provide you
with publications and information
designed to give you unbiased and
accurate reporting, and timely material.
Among your many benefits as a PRB
member are the *Population Today*
newsletter, the quarterly *Population*
Bulletins, the annual *World Population*
Data Sheet, and *PRB Reports on America*.

Membership rates: Individual, \$49;
Educator, \$39; Student/People 65+, \$34;
Library/nonprofit, \$64.

To begin your PRB membership, call
PRB (800) 877-9881 or visit our
website (www.prb.org).



Population Reference Bureau

1875 Connecticut Ave., NW, Suite 520

Washington, DC 20009-5728

Phone: (202) 483-1100

Fax: (202) 328-3937

E-mail: popref@prb.org

Website: www.prb.org