

## Elderly Americans

by Christine L. Himes

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*Elderly Americans  
are living longer  
and healthier lives.*

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*The baby-boom  
generation will swell  
the ranks of the  
elderly after 2010.*

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*The needs of elderly  
Americans present a  
major challenge for  
the 21st century.*

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# Elderly Americans

by *Christine L. Himes*

The United States is in the midst of a profound demographic change: the rapid aging of its population. The 2000 Census counted nearly 35 million people in the United States 65 years of age or older, about one of every eight Americans. By 2030, demographers estimate that one in five Americans will be age 65 or older, which is nearly four times the proportion of elderly 100 years earlier, in 1930. The effects of this older age profile will reverberate throughout the American economy and society in the next 50 years. Preparing for these changes involves more than the study of demographic trends; it also requires an understanding of the growing diversity within the older population.

The aging of the U.S. population in the next 20 years is being propelled by one of the most powerful demographic forces in the United States in the last century: the “baby boom” cohort, born between 1946 and 1964. This group of 76 million children grabbed media attention as it moved toward adulthood—changing school systems, colleges, and the workplace. And, this same group of people will change the profile and expectations of old age in the United States over the next 30 years as it moves past age 65. The potential effects of the baby boom on the systems of old-age assistance already are being evaluated. This cohort’s con-

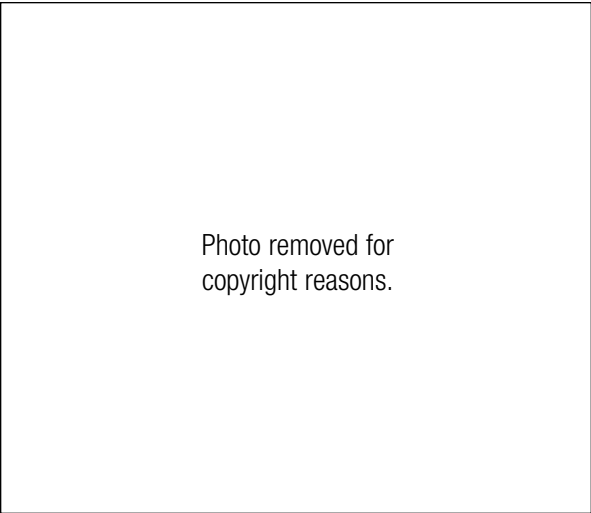


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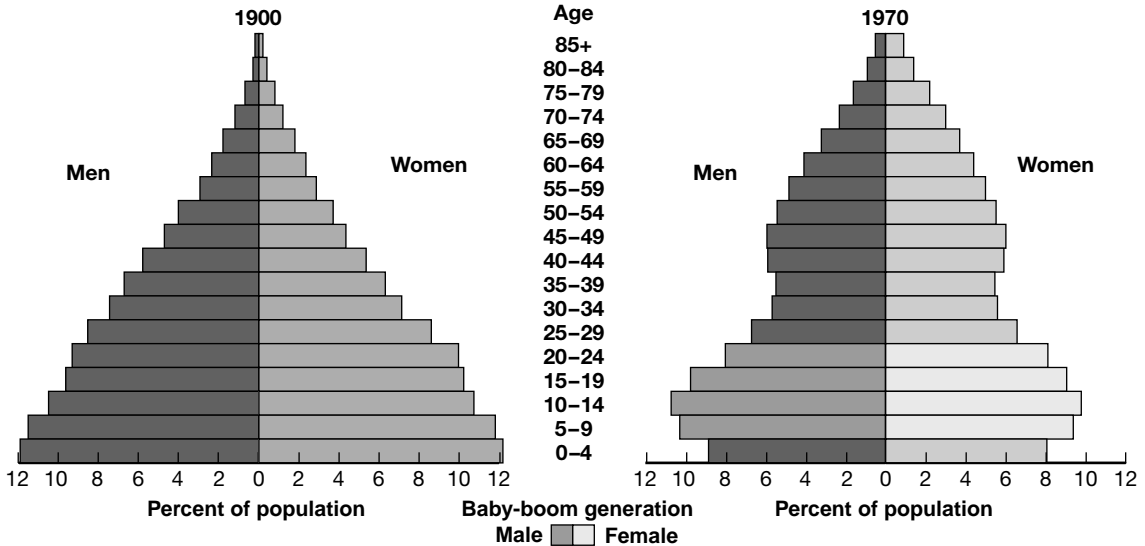
*The lives and well-being of older Americans attract increasing attention as the elderly share of the U.S. population rises: One-fifth will be 65 or older in 2030.*

sumption patterns, demand for leisure, and use of health care, for example, will leave an indelible mark on U.S. society in the 21st century. Understanding their characteristics as they near older ages will help us anticipate baby-boomers’ future needs and their effects on the population.

Until the last 50 years, most gains in life expectancy came as the result of improved child mortality. The survival of larger proportions of infants and children to adulthood radically increased average life expectancy in the United States and many other countries over the past century.

Figure 1

**U.S. Population by Age and Sex, 1900, 1970, 2000, and 2030**



Note: U.S. population in 1900 does not include Alaska or Hawaii. The baby-boom generation includes persons born between 1946 and 1964.

Sources: U.S. Census Bureau publications: *Historical Statistics of the United States: Colonial Times to 1970* (1975); *Census 2000 Summary File* (SF1) (<http://factfinder.census.gov>, accessed Sept. 5, 2001); and “Population Projections of the United States by Age, Sex, Race, Hispanic Origin, and Nativity: 1999 to 2100” ([www.census.gov/population/projections/nation/summary/np-t4-a.txt](http://www.census.gov/population/projections/nation/summary/np-t4-a.txt), accessed Sept. 25, 2001).

Now, gains are coming at the end of life as greater proportions of 65-year-olds are living until age 85, and more 85-year-olds are living into their 90s. These changes raise a multitude of questions: How will these years of added life be spent? Will increased longevity lead to a greater role for the elderly in our society? What are the limits of life expectancy?

Increasing life expectancy, especially accompanied by low fertility, changes the structure of families. Families are becoming more “vertical,” with fewer members in each generation, but more generations alive at any one time. Historically, families have played a prominent role in the lives of elderly people. Is this likely to change?

As much as any stage of the life course, old age is a time of growth, diversity, and change. Elderly Americans are among the wealthiest and among the poorest in our nation. They come from a variety of racial and ethnic backgrounds. Some are employed full-time, while others require full-time care. While general

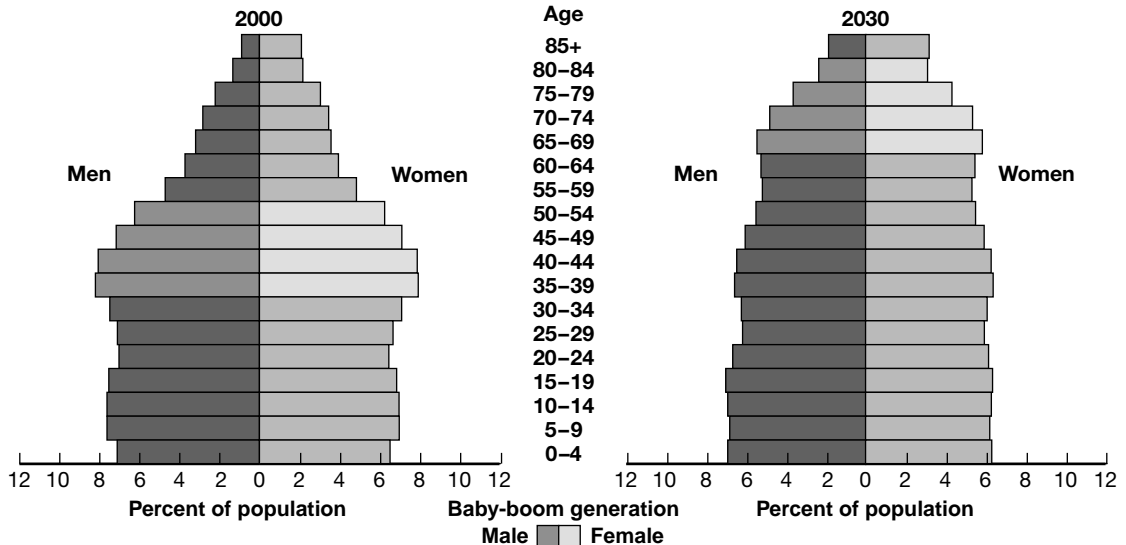
health has improved, many elderly suffer from poor health.

The older population in the 21st century will come to later life with different experiences than did older Americans in the last century—more women will have been divorced, more will have worked in the labor force, more will be childless. How will these experiences shape their later years?

The answers to these questions are complex. In some cases, we are confident in our predictions of the future. But for many aspects of life for the elderly, we are entering new territory. This report explores the characteristics of the current older population and speculates how older Americans may differ in the future. It also looks at the impact of aging on the U.S. society and economy.

## Increasing Numbers

The United States has seen its elderly population—defined at those age 65 or older—grow more than tenfold during the 20th century. There were



just over 3 million Americans age 65 or older in 1900, and nearly 35 million in 2000.

At the dawn of the 20th century, three demographic trends—high fertility, declining infant and child mortality, and high rates of international immigration—were acting in concert in the United States and were keeping the population young. The age distribution of the U.S. population was heavily skewed toward younger ages in 1900, as illustrated by the broad base of the population age-sex pyramid for that year in Figure 1. The pyramid, which shows the proportion of each age and sex group in the population, also reveals that the elderly made up a tiny share of the U.S. population in 1900. Only 4 percent of Americans were age 65 or older, while more than one-half (54 percent) were under age 25.

But adult health improved and fertility fell during the first half of the century. The inflow of international immigrants slowed considerably after 1920. These trends caused an aging of the U.S. population, but they were

interrupted after World War II by the baby boom. In the post-war years, Americans were marrying and starting families at younger ages and in greater percentages than they had during the Great Depression. The surge in births between 1946 and 1964 resulted from a decline in childlessness (more women had at least one child) combined with larger family sizes (more women had three or more children). The sustained increase in birth rates during this 19-year period fueled a rapid increase in the child population. By 1970, these baby boomers had moved into their teen and young adult years, creating a bulge in that year's age-sex pyramid shown in Figure 1.

The baby boom was followed by a precipitous decline in fertility: the “baby bust.” Young American women reaching adulthood in the late 1960s and 1970s were slower to marry and start families than their older counterparts, and they had fewer children when they did start families. U.S. fertility sank to an all-time low. The average age of the population started to climb

Table 1

**U.S. Total Population and Population Age 65 or Older, 1900–2060**

Year	Population (in thousands)		Percent 65+	Percent increase from preceding decade	
	Total	Age 65+		Total	Age 65+
<b>Actual</b>					
1900	75,995	3,080	4.1		
1910	91,972	3,950	4.3	21.0	28.2
1920	105,711	4,933	4.7	14.9	24.9
1930	122,755	6,634	5.4	16.1	34.5
1940	131,669	9,019	6.8	7.2	36.0
1950	150,697	12,270	8.1	14.5	36.0
1960	179,323	16,560	9.2	19.0	35.0
1970	203,212	20,066	9.9	13.4	21.2
1980	226,546	25,549	11.3	11.5	27.3
1990	248,710	31,242	12.6	9.8	22.3
2000	281,422	34,992	12.4	13.2	12.0
<b>Projections</b>					
2020	324,927	53,733	16.5	8.4	35.3
2040	377,350	77,177	20.5	7.5	9.8
2060	432,011	89,840	20.8	7.0	9.6

Note: Data from 1900 to 1950 exclude Alaska and Hawaii. All data refer to the resident U.S. population.

Sources: U.S. Census Bureau publications: *Historical Statistics of the United States: Colonial Times to 1970* (1975); *1980 Census of Population: General Population Characteristics* (PC80-1-B1); *1990 Census of Population: General Population Characteristics* (1990-CP1); *Census 2000 Demographic Profile*, ([www.census.gov/Press-Release/www/2001/tables/dp\\_us\\_2000.xls](http://www.census.gov/Press-Release/www/2001/tables/dp_us_2000.xls), accessed Sept. 19, 2001); and *Population Projections of the United States by Age, Sex, Race, Hispanic Origin, and Nativity: 1999 to 2100* ([www.census.gov/population/projections/nation/summary/np-t4-a.txt](http://www.census.gov/population/projections/nation/summary/np-t4-a.txt), accessed Sept. 25, 2001).

as the large baby boom generation moved into adulthood, and was replaced by the much smaller baby-bust cohort. By 2000, the baby-boom bulge had moved up to the middle adult ages. The population's age structure at younger and older ages became more evenly distributed as fluctuations in fertility diminished and survival at the oldest ages increased. By 2030, the large baby-boom cohorts will be age 65 and older, and U.S. Census Bureau projections show that the American population will be relatively evenly distributed across age groups, as Figure 1 shows.

The radical shift in the U.S. population age structure over the last 100 years provides only one part of the story of the U.S. elderly population. Another remarkable aspect is the rapid growth in the number of elderly, and the increasing numbers of Americans at the oldest ages, above ages 85 or 90. The most rapid growth

in the 65-or-older age group occurred between the 1920s and the 1950s (see Table 1). During each of these decades, the older population increased by at least 34 percent, reaching 16.6 million in 1960. The percentage increase slowed after 1960, and between 1990 and 2000, the population age 65 or older increased by just 12 percent. Since the growth of the older population largely reflects past patterns of fertility, and U.S. fertility rates plummeted in the 1930s, the first decade of the 21st century will also see relatively slow growth of the elderly population. Fewer people will be turning 65 and entering the ranks of "the elderly." Not until the first of the baby-boom generation reaches age 65 between 2010 and 2020 will we see the same rates of increase as those experienced in the mid-20th century.

In the 1940s and 1950s, the rapid growth at the top of the pyramid was matched by growth in the younger ages—the total U.S. population was growing rapidly, and the general profile was still fairly young. That was not the case in the second half of the 20th century, as the share of the population age 65 or older increased to around 12 percent. The elderly share will increase much faster in the first half of the 21st century. This growth in the percentage age 65 or older constitutes population aging.

Many policymakers and health care providers are more concerned about the sheer size of the aging baby-boom generation than the baby boom's share of the total population. The oldest members of this group will reach age 65 in 2011, and by 2029, the youngest baby boomers will have reached age 65. This large group will continue to move into old age at a time of slow growth among younger age groups. The Census Bureau projects that 54 million Americans will be age 65 or older in 2020; by 2060, the number is projected to approach 90 million. The size of this group, and the general aging of the population, are important in planning for the future. Older Americans increasingly



are healthy and active and able to take on new roles. At the same time, increasing numbers of older people will need assistance with housing, health care, and other services.

## The Oldest-Old

The older population is also aging as more people are surviving into their 80s and 90s. In the 2000 Census, nearly one-half of Americans age 65 or older were above age 74, compared with less than one-third in 1950; one in eight were age 85 or older in 2000, compared with one in 20 in 1950 (see Figure 2).

As the baby boomers enter their late 60s and early 70s around 2020, the U.S. elderly population will be younger: The percentage ages 65 to 74 will rise to 58 percent, as shown in Figure 2. By 2040, however, just 44 percent will be 65 to 74, and 56 percent of all elderly will be age 75 or older.

Those age 85 or older, the “oldest-old,” are the fastest growing segment of the elderly population. While those 85 or older made up only about 1.5 percent of the total U.S. population in 2000, they constituted about 12 percent of all elderly. More than 4 million people in the United States were 85 or older in the 2000 Census, and by 2050, a projected 19 million will be age 85 or older. These oldest-old will make up nearly 5 percent of the total population, and more than 20 percent of all elderly Americans. This group is of special interest to planners because those 85 or older are more likely to require health services.

## Gender Gap

Women outnumber men at every age among the elderly. In 2000, there were an estimated three women for every two men age 65 or older, and the sex ratio is even more skewed among the oldest-old.

The preponderance of women among the elderly reflects the higher death rates for men than women at every age. There are approximately 105 male babies born for every 100

Figure 2

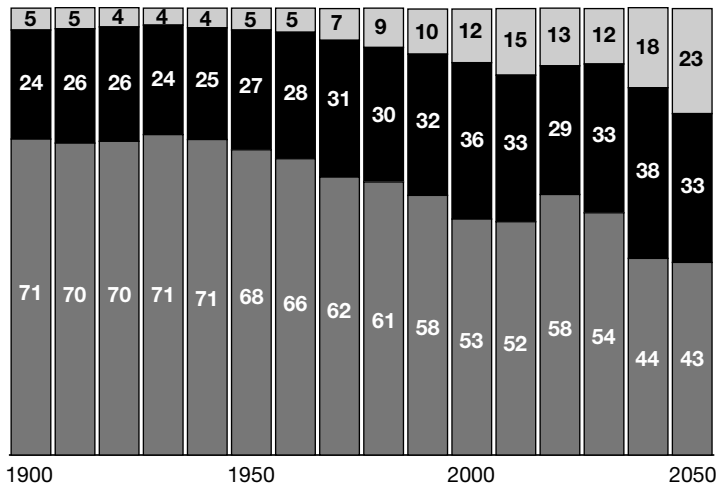
## Age Distribution of Older Americans, 1900–2000, and Projection to 2050

Percent of 65+ population

■ Age 65–74

■ Age 75–84

■ Age 85+



Sources: U.S. Census Bureau publications: *Historical Statistics of the United States: Colonial Times to 1970* (1975); *1980 Census of Population: General Population Characteristics* (PC80-1-B1); *1990 Census of Population: General Population Characteristics* (1990-CP1); *Census 2000 Demographic Profile* ([www.census.gov/2001/tables/dp\\_US\\_2000.xls](http://www.census.gov/2001/tables/dp_US_2000.xls), accessed Sept. 19, 2001); and “Projections of the Resident Population by Age, Sex, Race, and Hispanic Origin, 1990-2100” ([www.census.gov/population/www/projections/natdet-D1A.html](http://www.census.gov/population/www/projections/natdet-D1A.html), accessed July 6, 2001).

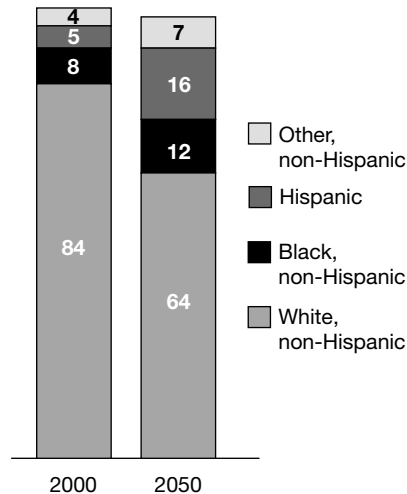
female babies, but higher male death rates cause the sex ratio to decline as age increases, and around age 35, females outnumber males in the United States. At ages 85 and older, the ratio is 41 men per 100 women.<sup>1</sup>

Changes in the leading causes and average ages of death affect a population’s sex ratio. In 1900, the average sex ratio for the U.S. total population was 104 men for every 100 women. But during the early 1900s, improvements in health care during and after pregnancy lowered maternal mortality, and a greater proportion of women survived to older ages. Adult male mortality improved much more slowly; death rates for adult men plateaued during the 1960s.

In recent years, however, male mortality improved faster than female mortality, primarily because of a marked decline in deaths from heart disease. The gender gap at the older

Figure 3  
**Elderly Americans by Race and Ethnicity, 2000 and 2050**

Percent of population age 65+



Note: The 2000 figures refer to residents who identified with one race. About 2 percent of Americans identified with more than one race in the 2000 Census.

Sources: U.S. Census Bureau, *Census 2000 Demographic Profile* (2001); and U.S. Census Bureau, "Projections of the Resident Population by Age, Sex, Race and Hispanic Origin, 1999-2100" ([www.census.gov/population/www/projections/natdel-D1A.html](http://www.census.gov/population/www/projections/natdel-D1A.html), accessed Sept. 19, 2001).

ages has narrowed, and it is expected to narrow further. The U.S. Census Bureau projects the sex ratio for those age 65 or older to rise to 79 men for every 100 women by 2050. A sex ratio of 62 is anticipated for those age 85 or older.

Most elderly women today will outlive their spouses and face the challenges of later life alone: Older women who are widowed or divorced are less likely than older men to remarry. Older women are more likely than older men to be poor, to live alone, to enter nursing homes, and to depend on people other than their spouses for care. Many of the difficulties of growing older are compounded by past discrimination that disadvantaged women in the workplace and now threatens their economic security.

As the sex differential in mortality diminishes, these differences may lessen, but changes in marriage and

work patterns, family structures, and fertility may mean that a greater proportion of older women will not have children or a living spouse. High divorce rates and declining rates of marriage, for instance, mean that many older women will not have spousal benefits available to them through pensions or Social Security.

## Ethnic Diversity

The U.S. elderly population is becoming more racially and ethnically diverse, although not as rapidly as is the total U.S. population. In 2000, about 84 percent of the elderly population were non-Hispanic white, compared with 69 percent of the total U.S. population. By 2050, the proportion of elderly who are non-Hispanic white is projected to drop to 64 percent as the growing minority populations move into old age (see Figure 3). Although Hispanics made up only about 5 percent of the elderly population in 2000, 16 percent of the elderly population of 2050 is likely to be Hispanic. Similarly, blacks accounted for 8 percent of the elderly population in 2000, but are expected to make up 12 percent of elderly Americans in 2050.

The major racial and ethnic groups are aging at different rates, depending upon fertility, mortality, and immigration among these groups. Immigration has a growing influence on the age structure of racial and ethnic minority groups. Although most immigrants tend to be in their young adult ages, when people are most likely and willing to assume the risks of moving to a new country, U.S. immigration policy also favors the entry of parents and other family members of these young immigrants. The number of immigrants age 65 or older is rapidly increasing as more foreign-born elderly move to the United States from Latin America, Asia, or Africa to join their children.<sup>2</sup> These older immigrants, plus the aging of immigrants who entered as young adults, are altering the ethnic makeup of elderly Americans.

# Geographic Distribution

One-quarter of all elderly Americans live in three states: California, with 3.6 million residents age 65 or older in 2000; Florida, with 2.8 million; and New York, with 2.4 million. Six other states had more than 1 million elderly residents counted in the 2000 Census: Illinois, Michigan, New Jersey, Ohio, Pennsylvania, and Texas. These nine states—which are also the most populous U.S. states—accounted for just over one-half of the population age 65 or older. Sparsely populated states such as Alaska, Wyoming, Vermont, and North Dakota have small elderly populations—less than 100,000 each in 2000.

States with large elderly populations, however, do not necessarily have older age profiles. California is still a relatively young state even though it has the greatest number of elderly residents: Less than 11 percent of the state's total population was age 65 or older in 2000. In contrast, nearly 18 percent of Florida's population was age 65 or older, the highest proportion of any state (see Table 2). The older population also exceeded 15 percent of the populations of Pennsylvania and West Virginia. While southern states are regarded as retirement magnets, states in the Northeast and Midwest have among the largest proportional share of the elderly.

The differences in states' age profiles are determined primarily by fertility and migration—mortality is fairly uniform among states. States with relatively high fertility rates, such as Utah, tend to have a younger age profile: A smaller proportion of state residents are age 65 or older. Migration, both internal and international, has a large impact on the elderly population's distribution. States in the Midwest and Northeast have seen steady outflows of younger people looking for job opportunities. As these younger people move south and west, the older population is left to "age in place."

Table 2

## States Ranked by Percent Age 65 or Older, 2000

Rank	State	Total resident population (thousands)	Population age 65+ (thousands)	Percent of population age 65+
1	Florida	15,982	2,808	17.6
2	Pennsylvania	12,281	1,919	15.6
3	West Virginia	1,808	277	15.3
4	Iowa	2,926	436	14.9
5	North Dakota	642	94	14.7
6	Rhode Island	1,048	152	14.5
7	Maine	1,275	183	14.4
8	South Dakota	755	108	14.3
9	Arkansas	2,673	374	14.0
10	Connecticut	3,406	470	13.8
11	Nebraska	1,711	232	13.6
12	Massachusetts	6,349	860	13.5
13	Missouri	5,595	755	13.5
14	Montana	902	121	13.4
15	Ohio	11,353	1,508	13.3
16	Hawaii	1,212	161	13.3
17	Kansas	2,688	356	13.3
18	New Jersey	8,414	1,113	13.2
19	Oklahoma	3,451	456	13.2
20	Wisconsin	5,364	703	13.1
21	Alabama	4,447	580	13.0
22	Arizona	5,131	668	13.0
23	Delaware	784	102	13.0
24	New York	18,976	2,448	12.9
25	Oregon	3,421	438	12.8
26	Vermont	609	78	12.7
27	Kentucky	4,042	505	12.5
28	Indiana	6,080	753	12.4
29	Tennessee	5,689	703	12.4
30	Michigan	9,938	1,219	12.3
31	District of Columbia	572	70	12.2
32	South Carolina	4,012	485	12.1
33	Minnesota	4,919	594	12.1
34	Illinois	12,419	1,500	12.1
35	Mississippi	2,845	344	12.1
36	North Carolina	8,049	969	12.0
37	New Hampshire	1,236	148	12.0
38	Wyoming	494	58	11.7
39	New Mexico	1,819	212	11.7
40	Louisiana	4,469	517	11.6
41	Maryland	5,296	599	11.3
42	Idaho	1,294	146	11.3
43	Washington	5,894	662	11.2
44	Virginia	7,079	792	11.2
45	Nevada	1,998	219	11.0
46	California	33,872	3,596	10.6
47	Texas	20,852	2,073	9.9
48	Colorado	4,301	416	9.7
49	Georgia	8,186	785	9.6
50	Utah	2,233	190	8.5
51	Alaska	627	36	5.7

Source: U.S. Census Bureau, *Demographic Profiles: Census 2000* ([www.census.gov/Press-Release/www/2001/demoprofile.htm](http://www.census.gov/Press-Release/www/2001/demoprofile.htm), accessed Sept. 19, 2001).

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*American women who reach age 65 can expect to live another 19 years, American men another 16 years. This gender gap diminishes at the oldest ages.*

California has been a traditional destination for state-to-state and international migrants, which has kept its population relatively young. States that have attracted older retirees, Florida in particular, have greater proportions of older residents.

## Health and Functioning

Life expectancy at birth is the average number of years a group of people born in a given year can expect to live, and it has increased dramatically in the United States since the beginning of the 20th century (see Table 3). Life expectancy at birth rose from 47.3 years in 1900 to 68.2 years in 1950, and 76.9 years in 2000, a gain of nearly 30 years over the century. The impressive gains in life expectancy early in the century were brought about by dramatic reductions in infant and childhood mortality. Improvements in public health, more sanitary household practices, and better medical care helped cut infant mortality from about 100 deaths per 1,000 births to less than 30 deaths per 1,000 births between 1915 and 1950. As vaccinations

against major childhood diseases became widely available, mortality of older children fell as well.<sup>3</sup>

After the dramatic improvements of the early 1900s, there was relatively little room for further improvements in mortality at the youngest ages by the end of the 20th century. By 1990, the infant mortality rate was below 10, meaning that 99 percent of infants survived their first year of life. Child mortality was also extremely low. Further improvement in the life expectancy would depend on reductions in adult mortality.

The number of years of life gained by extending life at older ages is relatively small. The expected number of remaining years of life for those who survive to age 65 was 11.9 years in 1900. This increased to 13.9 years in 1950, and 17.9 years in 2000. This means that, on average, someone reaching age 65 in 2000 could expect to live six years longer than a person age 65 at the beginning of the 20th century. Only about one-half of Americans born in 1900 were expected to live to age 60, however, while nearly 90 percent of those born in 2000 are likely to live to age 60.<sup>4</sup>

The gap between male and female life expectancy hovered between two and three years throughout much of the early 20th century. After 1940, however, improvements in male mortality stalled and women's life expectancy began to rise faster than that of men; the gender gap expanded to about seven years in the 1970s and 1980s. But the gap appears to be narrowing again in the early 21st century. In 2000, life expectancy at birth was 79.5 years for women and 74.1 years for men.

The female advantage in survival drops off at the oldest ages. It was only about one year at age 85 and less than one-half year at age 95 in 2000. Because the gap is already narrow at the oldest ages, further reductions in the gender gap in life expectancy at birth are likely to result from improved male survival at younger ages.

## Racial and Ethnic Mortality Gap

At most ages, the mortality rates for blacks are higher than those for whites—and life expectancy at birth is lower for blacks than for whites. Life expectancy for white women exceeds that of black women by about five years in 2000. The difference is about seven years among white and black men. These differences narrow at old ages, however, so that the black-white difference in life expectancy at age 65 is about 1.7 years, and it falls to zero at age 85. This narrowing results in part from a “crossover” in the mortality rates for blacks and whites at very old ages: The death rates of elderly blacks fall below those of elderly whites at advanced ages. At ages 90 and older, black men and women have slightly more years of additional life expected than do their white counterparts.<sup>5</sup>

The crossover phenomenon has been widely discussed by demographers, with two conflicting conclusions. One view holds that the mortality rates of the very old are inaccurate. Many people born in the late 1800s and early 1900s did not have birth records, and there is no way to verify their ages. Many very old people tend to overstate their age. If ages are overstated in both population and death records, then death rates are skewed downward for the older age groups.<sup>6</sup>

Another explanation for the crossover in mortality for black Americans is that blacks who are still alive at older ages are the hearty survivors of extraordinary mortality risks at younger ages. Because older whites were not exposed to the same mortality risks, they are more frail than blacks of the same age. This “heterogeneity of frailty” explanation is thought to be a combination of social and biological selectivity. If one subgroup in the population is subjected to harsher conditions in early life, they will experience higher mortality at young and middle ages. As a result a smaller, but more select, group will survive beyond those ages. This group may be genetically endowed to have a longer life span.<sup>7</sup>

Table 3

### Life Expectancy at Birth and at Age 65 in Years, by Sex, 1900, 1950, and 2000

	At birth			At age 65		
	Total	Male	Female	Total	Male	Female
1900	47.3	46.3	48.3	11.9	11.5	12.2
1950	68.2	65.6	71.1	13.9	12.8	15.0
2000	76.9	74.1	79.5	17.9	16.3	19.2

Sources: National Center for Health Statistics, *Health, United States, 2000* (2001): table 28; and A.M. Minino and B.L. Smith, *National Vital Statistics Reports* 49, no. 12 (2001): table 6.

Understanding the reasons for the crossover in mortality rates for blacks and whites at older ages may provide information about the future prospects for increased life expectancy for other groups within the population. Researchers are studying what the death rates at the oldest ages might express about mortality throughout life, and what the various causes of higher black mortality are at younger ages.

Researchers also look at other countries that have already achieved higher life expectancies than the United States. Japanese women have the highest life expectancy in the world: an average of 84 years in 2000.<sup>8</sup> Other industrialized countries are quickly approaching this level. Female life expectancy is 80 years or more throughout northern and western Europe. Iceland had the highest male life expectancy in 2000, at 78 years; male life expectancy is 77 years in Japan. These international examples help define the prospects for future life expectancy gains in the United States.

Realistic estimates of future life expectancy are important for many reasons. The Census Bureau relies on assumptions about future life expectancy to project the size and composition of the U.S. population. These projections are used for planning a wide variety of government programs. The Social Security Administration has a strong interest in knowing whether life expectancy will improve, decline, or remain stable because mortality trends will determine the number of future beneficiaries in the

*There is increasing doubt that the maximum life span is 120 years.*

Social Security system. Insurance companies use life expectancy estimates to determine premium levels and the rates at which benefits are paid out.

While current estimates of life expectancy are based on death rates observed in the population, projections of life expectancy are calculated by applying mathematical formulas to past patterns of mortality. Projecting life expectancy becomes more complex as analysts attempt to foresee changes in mortality by race, ethnicity, and gender. The most recent projections by the Census Bureau assume that mortality gaps between racial and ethnic groups will narrow. They also assume a slight narrowing of the gender gap in mortality over the next 100 years.

Because of the uncertainty inherent in these forecasts, most projections include a series of estimates using different assumptions about future patterns and rates of change. The Census Bureau, for example, publishes population projections using low, middle, and high assumptions of future life expectancy (in combination with assumptions about fertility and immigration trends). From a starting life expectancy of 74.0 years for men in 1999, their low series projects a life expectancy of 79.5 years in 2050 and 85.0 years in 2100. The high series, in contrast, projects a male life expectancy of 83.8 years in 2050, and 92.3 years in 2100. Similar differences are seen for women. Starting from a life expectancy of 79.7 years in 1999, the Census Bureau projects a life expectancy of 84.9 years in 2050 and 89.3 years in 2100 in their lowest series, compared with 88.4 years and 95.2 years for the same time periods in the highest series.

Many scientists believe that the maximum average human life expectancy for a population is around 85 years, and that the maximum human life span for humans is around 120 years—but both of these assumptions are widely debated.<sup>9</sup> Studies of humans and other animals indicate that individuals within an age group tend to die off at increasing rates as

the group ages. The risk of dying over the next year is greater for a 60-year-old than for a 55-year-old, for example, and the risk accelerates sharply after age 60. But scientists have discovered that this relationship changes at very old ages among humans and other animals. The rise in death rates decelerates; that is, while death rates continue to increase, the rate of that increase slows. Several theories have purported to explain this intriguing finding. One points to the effects of decreased population density as older members die off (particularly among animals studied in laboratory conditions) and another focuses on the greater diversity among the population that survives to the oldest ages. Neither of these explanations is sufficient to account for the mortality slowdown among the very old. Studies of animals raised individually still show a mortality deceleration in the oldest ages, which contradicts the theory that the slowdown in mortality reflects the health benefits of lower population density as a group loses more and more members. While a population might become more diverse as more members die off, researchers have concluded that this could not account for the slower increase in death rates. The phenomenon appears to occur at the individual level, and it may involve behavioral and physiological changes in individuals as they age.<sup>10</sup>

Mathematical models of longevity and survival allow for the possibility that the maximum life span could be much greater than the commonly assumed limit of 120 years. Studies in animal models show that the maximum life span of a population can be extended in a number of ways. Individual cases of superlongevity have been documented. The most notable was Jeanne Calment of France, who died in 1997 at the age of 122. The longest-lived man is considered to be Shigechiyo Izumi, who died in 1986 at the age of 120. As the number of supercentenarians increases, there is increasing doubt that the maximum age for humans stops at 120 years (see Box 1 on page 14).

## Causes of Death

The increasing life expectancy of the population is related to a marked shift in the leading causes of death. In 1900, tuberculosis, pneumonia, diarrhea and enteritis, and heart disease were the top causes of death in the United States. These four causes accounted for more than one-third of all deaths. At the end of the 20th century, heart diseases, cancer, stroke (cerebrovascular diseases), and lung diseases were the leading causes of death. They accounted for more than one-half of all deaths among Americans in 2000. This shift to chronic diseases associated with aging from infectious diseases that especially affect infants and young children reflects the epidemiologic transition that occurred in industrialized countries with improved sanitation, personal hygiene, and housing.<sup>11</sup> Mortality from diseases such as tuberculosis, pneumonia, influenza, and diarrheal diseases diminished as living conditions improved. Their decline was further hastened by advancements in medical care and the development of antibiotics in the 1930s. The elimination or control of infectious diseases increased life expectancy, but it also left people at greater risk of death from chronic and degenerative diseases related to aging.

The six leading causes of death for people age 65 or over in 2000 were heart diseases, cancer, stroke, chronic obstructive pulmonary disease, pneumonia and influenza, and diabetes (see Table 4). Heart diseases caused approximately 33 percent of all deaths among those age 65 or older. Nearly 600,000 older Americans died from heart diseases in 2000. Cancer accounted for 22 percent of the deaths to the elderly, and cerebrovascular diseases (which cause strokes) claimed another 8 percent.

In the 1980s and 1990s, deaths from heart disease and stroke declined steadily. These declines were most notable among those ages 65 to 74 and for whites in all age groups.<sup>12</sup> The lower mortality from heart disease is often attributed to such lifestyle changes as lower-fat diets, more exercise, smoking cessation, and control of high blood

Table 4

### Leading Causes of Death for Americans Age 65 or Older, 2000

Cause of death	Percent of deaths, persons 65+
All causes	100
Heart diseases	33
Cancer	22
Stroke	8
COPD*	6
Pneumonia, Influenza	3
Diabetes	3
Alzheimer's disease	3
Kidney diseases	2
Accidents	2
Septicemia	1
Other causes	17

\*COPD = Chronic obstructive pulmonary diseases, which include bronchitis, emphysema, asthma, and other chronic respiratory diseases.

Source: A.M. Minino and B.L. Smith, *National Vital Statistics Reports* 49, no. 12 (2001): table 7.

pressure.<sup>13</sup> Advances in treatment and prevention could lead to further declines. New treatments for heart disease, including aspirin therapy, more effective surgical procedures, and better emergency care, could reduce, or at least delay, deaths from heart disease.

The risk factors for heart disease are well-known and many Americans are adopting healthier lifestyles that will reduce their risk. But some population groups maintain lifestyles that increase their risk of heart disease. Obesity, for example, has increased among all population groups. It is especially high among blacks and Hispanics, and among Americans with a high school education or less.<sup>14</sup> Increased smoking rates among teens, especially among young women, could undermine the reduction in deaths from heart disease as well as other health gains.

Cancer is the second-ranked cause of death for elderly Americans, and it is the leading cause of death for women ages 65 to 74. Death rates from cancer are higher for blacks than for whites, particularly among men.

Much of the recent decline in cancer death rates among men is attributable to a drop in lung cancer deaths as smoking rates declined among adult

men.<sup>15</sup> The lag between starting to smoke and the development of lung cancer means that the death rates reflect behavior 20 to 30 years earlier. Lung cancer emerged as a leading cause of death for women in the 1970s, reflecting the rapid rise in smoking among women in the 1930s and 1940s. By 1990, lung cancer had eclipsed breast cancer as the leading

cause of cancer deaths among U.S. women, and lung cancer mortality rates continued to increase among women at least until 2000.<sup>16</sup>

Diabetes was the sixth-ranked cause of death among Americans age 65 or older in 2000. It was the third leading cause of death among American Indians and the fourth leading cause among black elderly. The National

### *Box 1*

## **Centenarians**

Reaching age 100 has long fascinated society. The century mark holds an almost mystical importance as a seal of hardiness and good health—the sign of a life well-lived. People who reach 100 are regularly feted in newspaper stories, television broadcasts, and family parties. Some get birthday greetings from the White House. As life expectancy increases, an increasing number of Americans are attaining this milestone.

Centenarians have a unique perspective on our recent history. Americans who reached age 100 in 2000 were born at the dawn of the 20th century. They were too young to participate in World War I and reached adulthood as the world was gripped by the 1918 influenza epidemic. This group was forming its families as the Great Depression started and had some of the highest rates of childlessness recorded in the United States. The advent of World War II found many of them too old to be called into service, but they were a vital force in stateside war efforts. Today's centenarians reached retirement age as the United States entered the Vietnam War and social turmoil of the 1960s and 1970s. They witnessed remarkable and unprecedented technological and medical advances in their lifetimes.

Centenarians may hold the key to the limits of life and are a new and fascinating focus for medical and social research. Researchers are examining their physical and mental health, their genes, their families, and their lifestyles, trying to unlock the secrets of long life.

The growth in the number of centenarians in the world is remarkable. Accurate records are difficult to come by before the 20th century, although there

have been claims of super longevity throughout history, such as the story of 969-year-old Methuselah in the Bible. Other examples of supercentenarian status are found in age claims of 122 years for St. Patrick of Ireland, 152 years for Englishman Thomas Parr (1483-1635), and groups of individuals in Bulgaria, Kashmir, and the Andes. Rigorous investigation of these claims, however, finds no evidence to support them. Some speculate that before 1900 the incidence of centenarians may have been as small as one per century. In small countries, like Denmark, researchers find little evidence of centenarians before the 19th century.<sup>1</sup> Given the rarity of living to age 100, it is possible that few populations were large enough until recently to produce any centenarians.

Verification of age is very difficult, even today. Many centenarians do not have birth records or other documents to confirm their stated age. Verification of age entails collecting credible and corroborating evidence from a variety of sources, including interviews with the person when possible. Reported life events are checked for consistency with historical records and documents. Verification becomes more difficult the older the individual and after his or her death.

The oldest known age ever attained was by Jeanne Calment, a Frenchwoman who died in 1997 at the age of 122. Ms. Calment is also the only documented case of a person living past 120, which many scientists had pegged as the upper limit of the human lifespan. In 2001, the oldest living woman appears to be 114-year-old Maud Farris Luce of the United States, born in 1887. The oldest documented age for a man is believed to be a



Institute of Diabetes and Digestive and Kidney Diseases uses the term “epidemic” to refer to the rates of noninsulin-dependent diabetes in the American Indian population.<sup>17</sup> Much of the increase is attributed to changes in traditional lifestyles that have resulted in higher body weights and decreased physical activity among American Indians. In addition to the deaths

attributed directly to diabetes on death certificates, diabetes is a likely contributing factor in many more deaths, particularly from heart disease.

## Health Status

Most older Americans report their health to be at least “good.” Such self-ratings of health status have proved to

Danish immigrant to the United States, Christian Mortensen, who died in 1998 at age 115. One man, Shigechiyo Izumi, is often reported as having reached the age of 120 before his death in 1986 in Japan, but his age has not been verified. Antonio Todde of Italy, born in 1889 and reaching age 112 in 2001, is believed to be the oldest living man, followed closely by two other men born later the same year.

Some 50,000 Americans were reported as centenarians in the 2000 U.S. Census. Centenarians account for less than 0.2 percent of the 35 million persons age 65 or older, and there is wide agreement that this is an overestimate because of chronic overreporting at the oldest ages.<sup>2</sup> Reliable counts for 1990 by the Social Security Administration, for example, put the number of centenarians as closer to 28,000 than the 37,000 reported in the 1990 Census.

As at all other older ages, women centenarians outnumber men. The 2000 Census recorded four women for every man age 100 or older. Detailed information on centenarians from the 1990 Census reveal that their racial composition is similar to that for all older Americans—78 percent of centenarians were non-Hispanic white and 16 percent were black. But centenarians have lower levels of education than other elderly Americans, which is not surprising for Americans born before 1900. And women age 100 or older are more likely than men to be widowed. Only about 4 percent of female centenarians counted in 1990 were currently married, compared with nearly 25 percent of the men age 100 or older.

Centenarians are not necessarily in poor health or suffering from chronic

disabilities. About 20 percent of the centenarians in the 1990 Census reported no disabilities, although they reported considerably more health problems than people in their 80s.<sup>3</sup>

What accounts for extreme longevity? It is likely that a combination of genetics, lifestyle, and luck<sup>4</sup> are responsible for a long life. As public health measures advanced early in the 20th century, cleaner water, vaccination campaigns, and better personal hygiene allowed more people to live to older ages. More recently, treatments for heart disease, cancer, and other chronic diseases have extended life at the upper extremes. A wide-ranging study of the genetic, physical, mental, and emotional characteristics of centenarians by Harvard University’s Thomas Perls suggests that genetic factors play a large role in longevity, although Perls also acknowledges the importance of lifestyle and attitude.<sup>5</sup>

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3. Ibid.
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5. Thomas T. Perls and Margery Hutter Silver, *Living to 100* (New York: Basic Books, 1999); and Jeune, “In Search of the First Centenarians.”

*Most older Americans report their health as 'good' or better.*

be good indicators of current overall emotional and physical health.<sup>18</sup> In a survey conducted in the mid-1990s, 72 percent of respondents age 65 or older said their health was good, very good, or excellent when asked to rate their health on a five-point scale that ranged from poor to excellent.<sup>19</sup> The proportion of elderly who report poor health increases with age. Even among those age 85 or older, however, a majority considered their health to be at least “good” in the survey.

Reports of health status vary by the race of the respondent. Non-Hispanic black elderly report the poorest health. Fifty-eight percent of blacks age 65 or older reported their health as good to excellent, compared with 65 percent of Hispanics and 74 percent of non-Hispanic whites. The gender gap in self-assessed health is greater among minority racial and ethnic groups. Hispanic and black women age 85 or older were generally in better health than Hispanic and black men of the same age.

Racial disparities in health at later ages are thought to result from several lifelong processes. At younger ages, minorities are less likely to be covered by health insurance or to have access to health services; and they are more likely to live in areas of pollution and toxins and to have more hazardous and physically demanding jobs. In addition, recent evidence points to the health effects of stress caused by, for example, discrimination and lack of autonomy on the job, and other emotional factors often experienced by disadvantaged groups.<sup>20</sup>

### **Chronic Diseases**

Chronic diseases—long-term diseases that are seldom cured but can often be managed with medication and lifestyle changes—often impair the ability of older people to live independent and active lives. While chronic conditions occur at all ages, older people are more likely to suffer from these debilitating conditions. These diseases have become the primary focus of health and

health care in later life. Chronic conditions often require more than medical care, they also require support for emotional, social, and personal care for long periods of time. As the older population increases, the number of people with chronic conditions is expected to increase as well.

The seven most common chronic health problems among those ages 70 or older are arthritis, hypertension, heart disease, diabetes, respiratory diseases, stroke, and cancer. Of these, arthritis is by far the most common, affecting more than 60 percent of women and nearly 50 percent of men in the 70-and-older group. The prevalence of arthritis increases with age: More than 60 percent of people age 85 or older reported problems with arthritis. Arthritis is seldom fatal, but it often severely limits physical activity. Elderly Americans with arthritis are less likely to report their health as very good or excellent and more likely to use health services than those without arthritis.<sup>21</sup>

Rates of hypertension are particularly high among elderly African Americans. Nearly 60 percent of non-Hispanic black elderly reported problems with high blood pressure in 1995 (see Figure 4). In contrast, cancer rates are much higher among the white population: More than 20 percent of older whites reported having cancer, compared with 9 percent of black and 11 percent of Hispanic elderly. Some of this variation in cancer risk may reflect differences in diagnosis and treatment, but it also stems from differences in health behaviors, diet, levels of stress, and other environmental factors.

Diabetes among the older population, particularly blacks and Hispanics, is of growing concern among health care professionals. In 1995, 20 percent of black elderly suffered from diabetes, compared with 11 percent of non-Hispanic whites. In addition, blacks are more likely than whites to suffer complications from diabetes, including eye problems, kidney failure, and amputations.<sup>22</sup>

Diabetes in the elderly, generally Type 2 (noninsulin-dependent) diabetes, is related to genetics as well as to diet and other lifestyle factors. The growing levels of obesity in some population groups contribute to the increased prevalence of diabetes, but do not account for all the differences among groups.

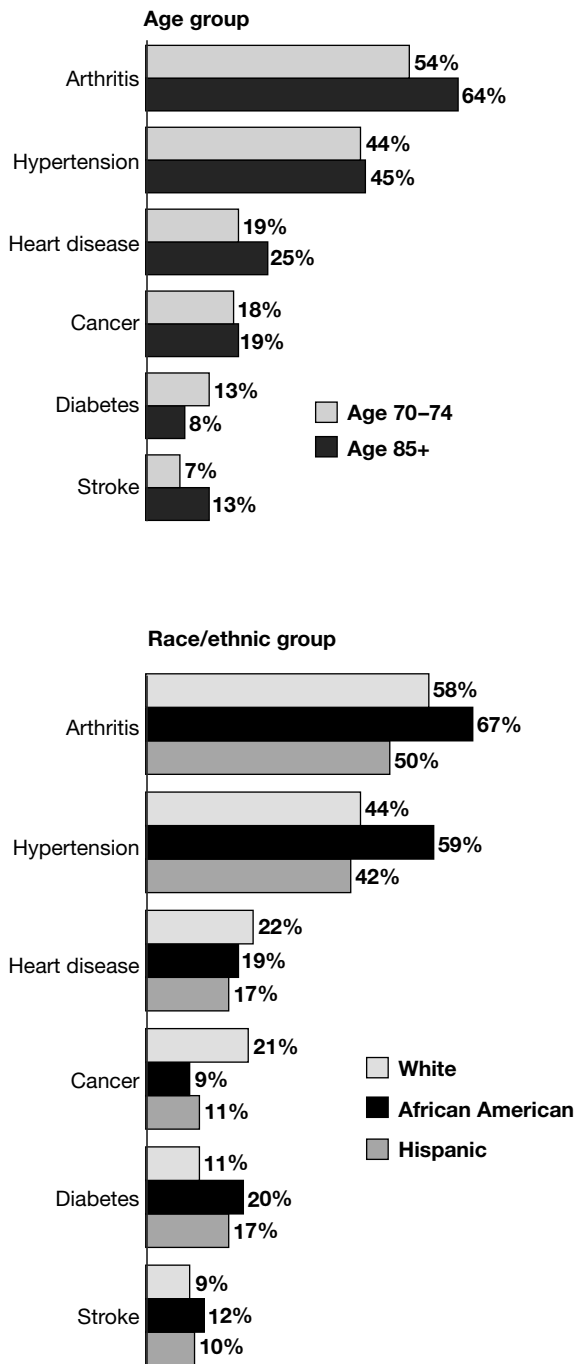
Trends in the prevalence of chronic disease are important indicators of future health care needs. Most of the increase in life expectancy at older ages results from earlier diagnosis and better treatment of life-threatening diseases, which allow people to live longer after the onset of a disease. As people live longer, the number of people reporting the presence of a chronic disease increases. Better treatment of heart disease, for instance, means that an individual may live long enough to develop other age-related problems such as arthritis and Alzheimer's disease (see Box 2 on page 18). Comparisons of disease reports between 1984 and 1995 reveal higher proportions of those age 70 or older reporting that they suffer from all of the major chronic diseases associated with age.<sup>23</sup> As mortality declines at older ages, it will become increasingly important to manage and treat debilitating conditions that limit functioning and activity in later life.

### Limitations

Some older people find that chronic illness or disability undermines the quality of their lives and limits their ability to live independently. The limitations in the "activities of daily living," or ADLs, often determine the extent and type of care older people need. These daily activities commonly include eating, dressing, walking, bathing, going outside, using the toilet, and transferring from a bed to a chair. For each activity, individuals are usually rated as having no difficulty, some difficulty, or as unable to perform the task. Elderly individuals are often eligible for health or personal-care assistance if they have difficulty with two or more ADLs. An

Figure 4

## Chronic Health Conditions Among Americans Age 70 or Older, by Race and Selected Age Group, 1995



Note: Whites and African Americans are non-Hispanic. Hispanics may be of any race.

Source: Federal Interagency Forum on Aging-Related Statistics, *Older Americans 2000: Key Indicators of Well-Being* (2000): table 14.

inability to feed oneself and problems with toileting are most likely to lead to institutionalization.

ADL limitation measurements, however, do not capture the true need for services in the elderly community. Cognitive impairments, for example, may not be reflected in ADL limitation counts, yet people with cognitive impairments often are unable to think logically, perform simple math, or follow directions, and they often require

help with everyday tasks. ADL limitations are not always measured the same way in different surveys and data collection methods and they are not always comparable. The way in which the question about difficulties is asked, the person who gives the assessment (the elderly person or a proxy), and the scope of the survey population (all elderly or only those who do not live in institutions) can affect estimates of the levels of difficulty.<sup>24</sup>

### *Box 2*

## **Alzheimer's Disease**

Alzheimer's disease (AD) is a progressive brain disorder that results in memory loss, behavior changes, and a decline in cognitive abilities. It is the most common cause of dementia in the older population. An estimated 4 million Americans suffer from the disease; most are elderly. More than 350,000 new cases are diagnosed each year; this number is expected to increase as the size of the older population increases.<sup>1</sup>

The disease usually has a gradual onset characterized by forgetfulness, but eventually produces increasingly severe and irreversible disability. The average length of life after diagnosis is eight to 10 years, although some individuals live with the disease for 20 or more years. The cause of AD is not known, but researchers believe it may involve a complex set of changes including genetics, oxidative damage,<sup>2</sup> inflammation, and stroke. There are two identifiable types of AD: familial and sporadic. Familial AD, which is inherited, accounts for only about 10 percent of cases. It occurs at much earlier ages, generally affecting people ages 30 to 60, and it tends to progress more rapidly than sporadic AD, which is not inherited and has a much later onset.

Although the risk of developing Alzheimer's disease increases with age and symptoms generally appear after age 60, it is not considered a part of normal aging. In early stages of the disease, individuals may forget names of familiar people and objects, think less clearly, and show small changes in personality. As the disease progresses, peo-

ple with AD forget how to perform simple tasks such as dressing and bathing. Individuals in the late stages of AD are prone to infections and illnesses and require intensive care either at home or in an institutional setting. The disease eventually leaves people bedridden and unable to care for themselves.

While it has been recognized as a cause of death for decades, Alzheimer's disease gained acceptance as a direct or contributing cause of death only in the 1980s, reflecting better diagnosis, an increased willingness to acknowledge the disease, and wider recognition that the disease itself caused death. Through the 1980s, the number of deaths attributed to AD increased rapidly because of this heightened awareness among medical practitioners. Over the last several years the death rate for AD has remained relatively constant. In 2000, it ranked as the seventh most common cause of death for Americans age 65 or older.<sup>3</sup>

Clinicians use several tools to diagnose AD in a patient. Brain scans, assessments of memory, language skills, and other measures of brain functioning, and a physical exam can rule out other causes of memory difficulties and confirm a probable diagnosis of AD. A conclusive diagnosis of AD, however, can only be made by brain autopsy after death. Earlier diagnosis of AD can help physicians manage the symptoms and help families and patients plan future care options. Early diagnosis can also allow AD patients to participate in decisionmaking about their futures and use adaptive strategies for maintaining independence.

In the 1990s, about 17 percent of persons age 65 or older had some limitation in at least one ADL or were living in an institution (implying they were limited in two or more ADLs).<sup>25</sup> The most common limitation among those living in the community (not in a nursing home or other institution) was the ability to get outside, followed by problems with walking and bathing. The ability to eat independently is the least common ADL difficulty among

the 65-or-older population in the community: Less than 2 percent of community-dwelling elderly reported problems with eating in the 1990s.

The extent of limitations increases substantially with age. In a 1991 survey, about 35 percent of the 85-or-older population living in the community reported some difficulty in walking across a room alone, compared with just 9 percent of those ages 65 to 74.<sup>26</sup> Even among the oldest-old, however,

There is no cure for AD. Research is focused on slowing its progression and preventing its occurrence. Two new drugs improve the cognitive functioning of AD patients by inhibiting a key enzyme in brain function. These drugs appear to be effective for some in the early stages of the disease, but do not halt the progression of the disease. Management of the disease focuses mainly on controlling some troubling AD symptoms, including verbal and physical aggression, agitation, depression, and wandering.

In contrast to many other chronic disease conditions, Alzheimer's disease is not associated with income or economic status. Women are more likely to suffer from AD than are men, but this primarily reflects their longer life expectancy. Elderly Americans with Alzheimer's are more likely than other elderly to be in poor physical health. About 66 percent of the elderly population with AD report health status as fair or poor, compared with 27 percent of the general elderly population. Those with AD and other dementias are likely to have other chronic and acute health problems as well. Many suffer from pneumonia, coronary artery disease, and osteoarthritis.

AD exacts a devastating toll on individuals and society. The annual cost of caring for those with AD is close to \$50 billion, including the costs of treatment, care, and lost wages by patients and family caregivers. While providing care to any elderly family member can be difficult and stressful, it is especially

difficult for people caring for an elderly person with dementia. Dementia caregivers spend more hours per week in care activities and provide assistance with more activities than do nondementia caregivers.<sup>4</sup> They are more likely to miss work, change to part-time work, turn down promotions, and choose early retirement than people who care for other (nondementia) elderly. The stress of caring for a dementia sufferer—who may develop behavior problems and may not recognize his or her caregiver—leads to higher rates of physical and mental problems among caregivers.

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*Longer life expectancies mean that more American families will include older relatives for more years. Older family members can enrich family life, but they also require care and support.*

difficulties in eating and toileting are the least common ADL limitations for those living in the community.

In addition to ADLs, researchers may rate how well elderly Americans can perform complex tasks known as “instrumental activities of daily living” (IADLs), which are necessary for older persons to live successfully on their own. IADLs include preparing a meal, shopping for personal items, managing money, using the telephone, and doing light housework. Even though the number of older Americans has increased and there are more elderly people in the oldest age groups, the percent of older Americans reporting difficulty with these complex tasks has declined considerably over the past 20 years. In 1999, about 3 percent of elderly reported difficulty with IADLs, compared with about 6 percent of elderly in 1982. While difficulties with IADLs are viewed as less serious than limitations in ADLs, they can indicate the ability of a person to live independently and signal problems in cognitive functioning.

While the prevalence of chronic diseases is increasing in the older population, recent studies confirm that rates of chronic disability are declining and that these declines are most rapid in the oldest age group,

people age 85 or older. Between 1982 and 1999, the prevalence of chronic disability, defined as difficulty with any IADL or ADL, declined from 26 percent to less than 20 percent. Part of this change may reflect increasing levels of education and new product and environmental designs that enable individuals to perform fairly complex tasks despite minor impairments. Improvements in the management and treatment of underlying chronic diseases probably also reduced chronic disability.

The decline in chronic disability among elderly Americans is a hopeful sign that more people now entering retirement age will be able to live independently. This trend also eases the concern that, although people were living longer lives, the years gained were plagued by increasing disability.<sup>27</sup> Now, increases in life expectancy are more likely to be years of healthy life. As mortality rates continue to fall and elderly people live longer lives, understanding the relationship between these years of long life and disability will become increasingly important.<sup>28</sup>

## Family Roles

The study of aging and older persons is inevitably tied to the study of families. Aging affects the roles that older individuals play in their families and the roles that families play in the lives of their older relatives. Families are a source of support and affection, and they provide links to culture and heritage. But families are not static units. They change in form and function; their role in society evolves. The increasing participation of women in the paid work force, the postponement of marriage, the greater prevalence of divorce, and the increase in childbearing outside of marriage all have affected families.

Increasing life expectancy has brought two major changes in family structure and function. First, more generations are alive at any one time, which increases the size and breadth

of families.<sup>29</sup> Second, the longer average life expectancy has increased the length of time families are likely to include a family member with an age-related disability. It is too soon to know how these changes will affect American family life. Much will depend on trends in disability among older Americans: the proportion of later life spent with a disability, the number of years an older person may need assistance with daily activities, and the age at which that assistance is needed. Because family members have traditionally provided care to elderly relatives, the need to care for frail family members who live to advanced ages may place a greater strain on family members, especially when adult children, nieces, or nephews are themselves beginning to suffer from age-related impairments. If, however, longer lives yield more years of good health, as recent trends suggest, older Americans may be able to play an active role in their families until very old ages.

Fertility trends of the past century influence not only the size and shape of the older population, but of their families as well. Two trends especially important for the family relationships of older people are the proportion of women who remain childless and the age at which other women have children. An unusually high percentage of women who were in their childbearing ages in the 1930s never had any children. These same women entered older ages in the 1970s without adult children to provide social, emotional, and financial support. In contrast, American women in their childbearing ages during the 1950s had very low rates of childlessness. A much greater proportion of these women had at least one living child when they reached their 60s and 70s.<sup>30</sup> Many women in their childbearing ages in the 1970s and later delayed having children until their late 20s and 30s. These women who had children later in life are more likely to need to provide care for dependent children and a parent simultaneously.

Early childbearing carries its own costs to family life. Another group of women have children at very young ages—which can also affect the family roles of older parents and grandparents. Young parents, often single mothers, frequently need more assistance than parents who bear their children later. These young parents often turn to their own parents as the primary resource for financial and emotional assistance. The importance of grandparents in providing care and support for grandchildren is receiving increasing attention from researchers, and prompted the addition of a special question about grandparenting on the 2000 Census.<sup>31</sup>

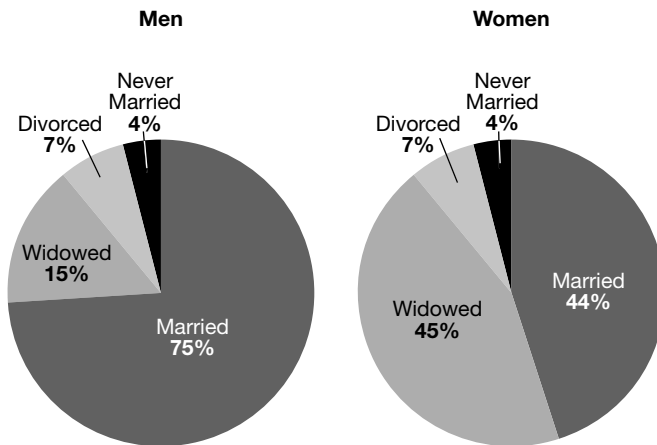
Marriage and marital dissolution also affect the structure of families and the lives of older Americans. Marriage continues to be the norm for family formation in the United States. This was particularly true for people now age 65 or older. More than 95 percent of older Americans have been married. Marriage is important for older Americans for several reasons. The presence of a spouse provides a variety of resources in the household. Married elderly are less likely to be poor, to enter a nursing home, or to be in poor health. Spouses are the primary caregivers to their partners.

Most men age 65 or older are married, but most elderly women are not: In 2001, about 75 percent of men were currently married, compared with 44 percent of women age 65 or older (see Figure 5, page 22). But women are likely to outlive their husbands, and older women are less likely than older men to remarry after being widowed or divorced. Accordingly, older women are more likely than older men to be divorced or widowed. At the oldest ages, both men and women are less likely to have a surviving spouse, but the gender gap is even wider: Thirteen percent of women, compared with 53 percent of men, age 85 or older were married in 2001. While the likelihood of having experienced a divorce has increased over time, only a small percentage of

*Increases in life expectancy are likely to be years of healthy life.*

Figure 5

## Marital Status of Men and Women Age 65 or Older, 2001



Note: Percentage may not add to 100 because of rounding. "Married" includes persons who remarried after divorce or widowhood.

Source: PRB analysis of the March 2001 Current Population Survey.

Americans age 65 or older are divorced: 7 percent in 2001.

Increasingly, American men and women have put off marriage until later ages, and many may not marry at all. The median age of first marriage increased from 22.5 years for men and 20.1 for women in 1956 to 26.8 years for men and 25.1 years for women in 2000.<sup>32</sup> As Americans wait longer to get married, the proportion who never marry is likely to increase. While just 6 percent of women 30 to 34 years of age in 1970 had never been married, for example, by 2000, 22 percent of women in their early 30s had never been married. Whether this delay signals a permanent retreat from marriage is still unclear, but it is likely to affect the lives of these Americans when they enter older ages in the 21st century.

### Caregiving

Spouses and other family members are important sources of support to frail or disabled older adults. Those without family support are more likely to be institutionalized. Family members provide a wide range of assistance to their kin. They commonly

provide transportation to older people who cannot drive or negotiate public transit; they help with shopping, cooking, and other household chores. Increasingly, family members are responsible for providing health care as well. The trend toward more outpatient treatments and procedures, and earlier discharges from hospitals, requires that a family member be available for changing dressings, administering medications, and monitoring status. Families also assist elderly relatives with personal care on a day-to-day basis. Many family members provide help with dressing, feeding, bathing, and toileting activities. This high level of care can be both physically and mentally challenging for family caregivers, especially when the elderly relative has dementia.

Although many family members may share caregiving tasks, most of the family care provided to an older person comes from a single primary caregiver.<sup>33</sup> Caregivers are usually close family members. If a spouse is not available or is unable to provide care, adult children are likely to become the primary caregivers. Increasingly, adult children are taking on the role of caregiver. Recent research has found that adult children are more likely than a spouse to be the primary caregivers for frail individuals age 70 or older.<sup>34</sup>

The source of family care varies by the race and ethnicity of the family (see Figure 6). Frail elderly in white families are more likely to receive care from a spouse than elderly in black or Hispanic families. Black elderly are more likely than others to have an adult grandchild as a caregiver—10 percent of the care provided to black elderly age 70 or older came from adult grandchildren in 1993, compared with 4 percent among whites and 6 percent among Hispanics. Older blacks also are more likely to rely on someone outside of the family for care. One-third of blacks age 70 or older were receiving care from a nonrelative in 1993. Adult children are more likely to be primary caregivers for Hispanic



elderly than for white or African American elderly.

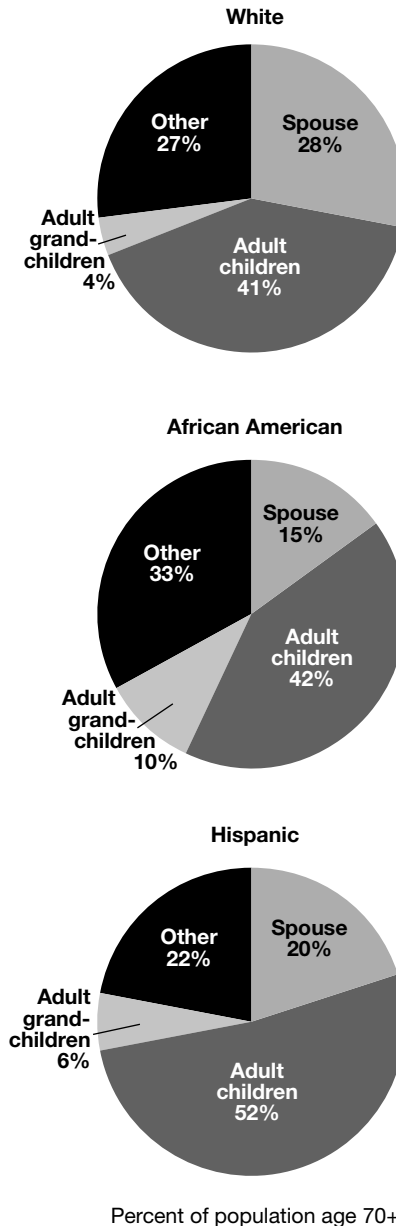
Geographic proximity, gender, marital status, and the type of relationship a child has with his or her parent all come into play when an adult child assumes the caregiver role for a frail parent. Adult daughters tend to occupy this role more often than sons; this is especially true the more impaired the older person becomes.<sup>35</sup> Some research suggests that men tend to take on roles that emphasize traditionally male tasks such as financial management, home repairs, and dealing with formal organizations, while women are more likely to be involved in traditionally female direct care tasks, such as bathing and feeding.

The willingness and availability of family members to provide care for elderly relatives has important implications for public policy and for individual lives in the future. Women are traditional family caregivers, but increasing percentages of women are employed full time and do not have the time to devote to eldercare. Adult children often do not live near enough to their parents to help them with daily or weekly tasks. Only slightly more than one-half of elderly people with children have a child living within 10 miles.<sup>36</sup> Many analysts maintain, however, that family members will continue to provide high levels of care to elderly relatives, which will be crucial to the well-being of older Americans.<sup>37</sup>

## Grandparenting

One of the most common family roles associated with later life is becoming a grandparent.<sup>38</sup> While grandparents are associated with a popular image of white hair and retirement, grandparenthood occurs relatively early for most adults. The transition to grandparenthood occurs, on average, before age 50, and it is earlier among blacks and Hispanics than among whites (see Table 5, page 24). By age 65, however, 84 percent of all men and 80 percent of all women were grandparents in 1993.

Figure 6  
Sources of Informal Care for Frail Elderly Americans, by Race, 1993



Note: Whites and African Americans include Hispanics. Hispanics may be of any race.

Source: National Academy on an Aging Society, "Caregiving," *Challenges for the 21st Century: Chronic and Disabling Conditions*, no. 7 (2000).

Table 5

**Timing of Grandparenthood and Grandparenting Roles, 1992–1994**

	Men				Women			
	All	Black	White	Hispanic	All	Black	White	Hispanic
Age at birth of first grandchild (years)	48.7	44.9	49.2	47.6	45.8	41.5	46.7	42.3
Percent of grandparents:								
With children under age 18								
at birth of first grandchild	62	83	57	84	62	76	59	84
Employed > 30 hours/week	42	48	41	47	29	41	27	36
Percent who are grandparents, by age								
40-54	28	43	26	27	39	59	36	47
55-64	75	86	74	95	81	86	82	69
65 or older	84	85	84	90	80	79	79	90
People with a child age 40+ who are grandparents (%)	94	84	94	86	95	99	95	100

Note: These data are from Wave 2 of the National Survey of Families and Households, conducted between 1992 and 1994.

Source: Adapted from M. Szinovacz, *The Gerontologist* 38, no. 1 (1998): 37-52.

Americans become grandparents while fulfilling a variety of other roles. Grandparents usually have a child still at home when their first grandchild is born. A survey conducted in the mid-1990s found that about 62 percent of grandparents had at least one child under age 18 when their first grandchild was born. In addition, many grandparents still participate in the formal labor market. In the mid-1990s, 42 percent of grandfathers and 29 percent of grandmothers were working at least 30 hours per week. Most grandparents, with the exception of black women, are married, and about one-third still have a living parent.

Some grandparents serve as surrogate parents to their grandchildren—a phenomenon that is gaining increasing attention. Grandparents take on these parenting roles when their adult children face economic or social problems, which can include incarceration, substance abuse, death, or illness. An estimated 3.9 million children were living in homes maintained by their grandparents in 1997, a substantial increase since 1970.<sup>39</sup> Although both parents and grandparents were present in about 63 percent of these households in 1997, households containing grandchildren and grandparents only have been increasing rapidly.

Grandmothers are more likely than grandfathers to maintain a family with

dependent children. The effects of this gender difference show up in a variety of ways. Single grandmothers who maintain a household for their grandchildren are more likely to be poor. About 57 percent of these families had incomes below the poverty line in 1997, compared with 14 percent of families consisting of two grandparents and grandchildren. More than one-half of grandmother-only families were headed by black women in 1997; 28 percent were headed by white women.<sup>40</sup>

## Living Arrangements

Living arrangements reflect many different factors: health status, economics, marital status, cultural values, and family ties. Most older people prefer to live independently in their own homes: 90 percent of men and 80 percent of women age 65 or older live either alone or with their spouse (excluding those living in nursing homes or other institutions). Some men and women live in households with other relatives, but only a small percentage of those in the community live with nonrelatives.

Older men, who are more likely than older women to be married, are less likely than older women to live alone (see Figure 7). Only 17 percent

of elderly men lived alone in 2000, and 73 percent lived with their spouses. About 40 percent of women age 65 or older lived alone; 41 percent lived with a spouse. Women are more likely to live alone the older they get: About 60 percent of women age 85 or older lived alone, about twice the rate seen among men of the same age.

Racial and ethnic differences in marriage and divorce, economic stability, and culture are reflected in living arrangements of racial and ethnic groups. Lower rates of marriage mean that black men and women are less likely than other groups to be living with a spouse in later life: 54 percent of elderly black men and 25 percent of elderly black women lived with a spouse in 2000. Hispanic elders are also less likely than whites to be in a household with their spouse, 67 percent of Hispanic men and 38 percent of Hispanic women lived with their spouses. Black women, however, are much more likely to live with other relatives, commonly children and grandchildren. This pattern is seen for Hispanic and Asian women as well. Older African American men have the highest rates of living alone—about 22 percent of black men age 65 or older lived alone in 2000.

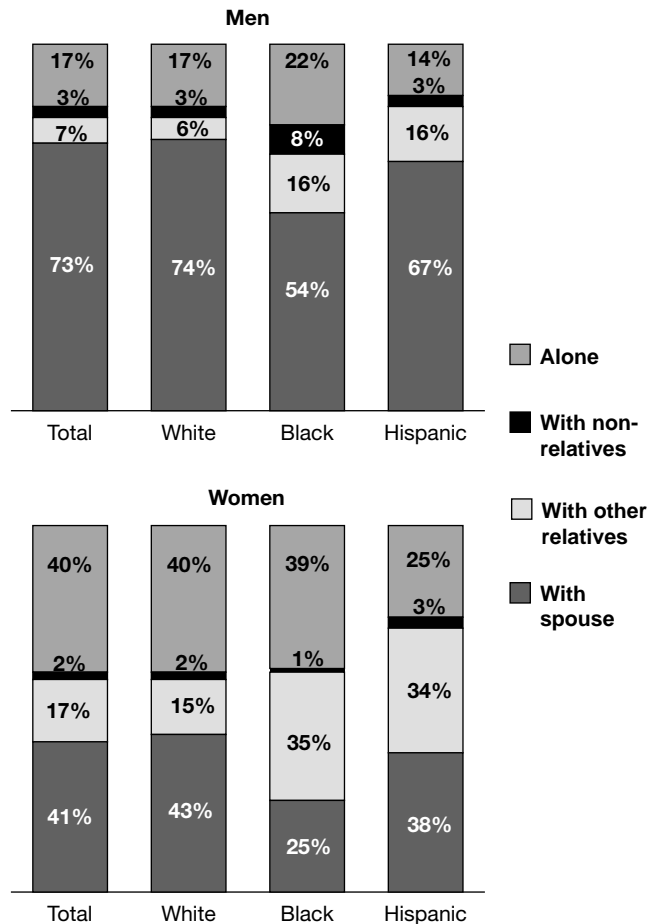
## Housing

The vast majority of older people in America own their own homes. In 2000, about 80 percent of those age 65 or older owned a home. Homeownership is higher among those ages 65 to 69 (83 percent) than in any other age group,<sup>41</sup> although homeownership rates are somewhat lower among the oldest-old and for elderly who live alone. Older minority Americans also are less likely to be homeowners. In 2000, about 66 percent of older blacks and 59 percent of older Hispanic households were homeowner-households.

The vast majority of older persons want to remain in their current residence—a phenomenon called “aging in place.” Many elderly Americans opt

Figure 7

### Living Arrangements of Men and Women Age 65 or Older, by Sex and Race or Ethnicity, 2000



Source: PRB analysis of the March 2000 Current Population Survey.

for familiar surroundings regardless of the condition of their housing unit, the nature of the neighborhood, or their own changing personal needs. The quality of homes owned by most elderly is good; only about 5 percent of housing units have severe or moderate structural problems. Still, many older people live in older homes that are costly to maintain and hard to heat and cool. Older homes often have fewer bathrooms than newer houses, or the houses have bathrooms only on the second floor, making daily life more difficult for physically frail elderly. Heating and cooling costs are higher for homes

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*Most older people live in their own homes unless their health needs require specialized care. Only about 5 percent of the older population lives in a nursing-home type residence.*

with poor insulation, unused rooms, and older furnaces.

Most older people do not move: Only about 5 percent of all elderly Americans move in any year, and the elderly represented less than 4 percent of all movers in the United States in 2000. Some older persons decide to move to be closer to family or to enjoy a new climate. Others move because of declining health or the death of a spouse. But most do not move very far away: More than one-half of residential moves by older people are within the same county.<sup>42</sup>

There are increasing housing options open to older people. Some opt for lower-maintenance, smaller homes in retirement communities. Those who need help with activities of daily living sometimes choose assisted-living residences. These facilities combine housing with personal and health care service and provide more assistance than is available in a retirement community, although they generally do not provide skilled nursing services.

Assisted-living facilities have gained popularity in recent years as older people and their families seek alternatives to nursing-home care. The number of assisted-living facilities is expected to grow to meet the

increasing demand from the aging U.S. population.

Residents of assisted-living facilities often are still quite healthy, but require assistance with personal and household care. Assisted-living residents can often get prepared meals, housekeeping services, assistance with medication and transportation, and help with bathing, dressing, and other personal care needs. They tend to be older than the general elderly population. According to a survey by the National Center for Assisted Living, a trade organization, the average resident of an assisted-living facility is between 75 and 85 years of age, female, and needing assistance with 2.25 ADLs.<sup>43</sup> Assisted living is much less costly than nursing-home care, and may be more appropriate for some elderly, particularly those with dementia. Most residents pay for their own housing costs; assisted living is generally not covered by Medicare or Medicaid because it does not qualify as skilled nursing care. About one-third of assisted-living residents eventually move into a skilled nursing home.

Nursing homes usually provide skilled nursing care services to individuals who do not need hospital care, but are too frail or ill to live independently with home health care services. But the term “nursing home” can encompass a wide range of facilities. Nursing homes often serve two distinct groups: longer-term residents with chronic conditions who are unable to be cared for at home and short-term residents who are recovering from injuries, surgery, or acute illnesses. Among current residents, the average length of stay in a nursing home is nearly two and one-half years (870 days), although the average stay is only about 60 days among those admitted for recovery from an illness or rehabilitation after surgery.<sup>44</sup>

A majority of nursing-home residents (57 percent) are admitted directly to the nursing home from a hospital. The general trend toward shorter hospital stays to cut medical costs means that more individuals go to nursing homes for recovery follow-

ing an acute illness or injury. As a result, an increasing number of nursing-home residents are discharged back to the community after a short-term rehabilitation. In 1997, 29 percent of people leaving a nursing home were sent back to the community after recuperation, compared with only 18 percent of those discharged in 1985. Like other older Americans, older nursing-home residents are primarily female and white. The average age at admission to a nursing home among those 65 or older is 82.6 years. About half are age 85 or older.

About one-half of all nursing-home residents are cognitively impaired, and most have serious physical impairments. On average, nursing-home residents have difficulty with at least four of the six ADLs (bathing, dressing, eating, transferring from a bed to a chair, toileting, and walking). Incontinence—difficulty controlling bladder or bowel function—is often a key contributor to the decision to enter a nursing home. Nearly 60 percent of elderly nursing-home residents are incontinent.

Continuous care retirement communities (CCRCs) are a specific type of retirement community that combines a variety of housing types and care services. Unlike other age-segregated retirement communities that focus on leisure activities and amenities, CCRCs usually include independent housing units, assisted-living facilities, and skilled nursing homes on their sites. The communities are designed to serve older residents as their needs change over time. Residents may move from one type of unit to another to match their health needs. Typical CCRCs provide meals, housekeeping, and laundry services for all residents. Some offer recreational classes, exercise facilities, and educational and hobby groups. Physical therapy, assistance with personal care needs, and skilled nursing also may be provided to those in independent units or in assisted-living quarters.

The average elderly individual cannot afford to live in a CCRC. Many require entry fees ranging from \$20,000 to \$400,000. Most have hefty

monthly service fees, although many CCRCs are moving to fee-for-service arrangements. Increasingly, CCRC communities are built and managed by leaders in the hospitality industry, rather than the health care industry, and they are becoming financially viable businesses. Because CCRCs assume the risk of providing long-term care services to anyone they admit, they carefully screen residents before accepting them. Accordingly, CCRC residents tend to be wealthier, more educated, and in better health than the general older population.

## Work and Retirement

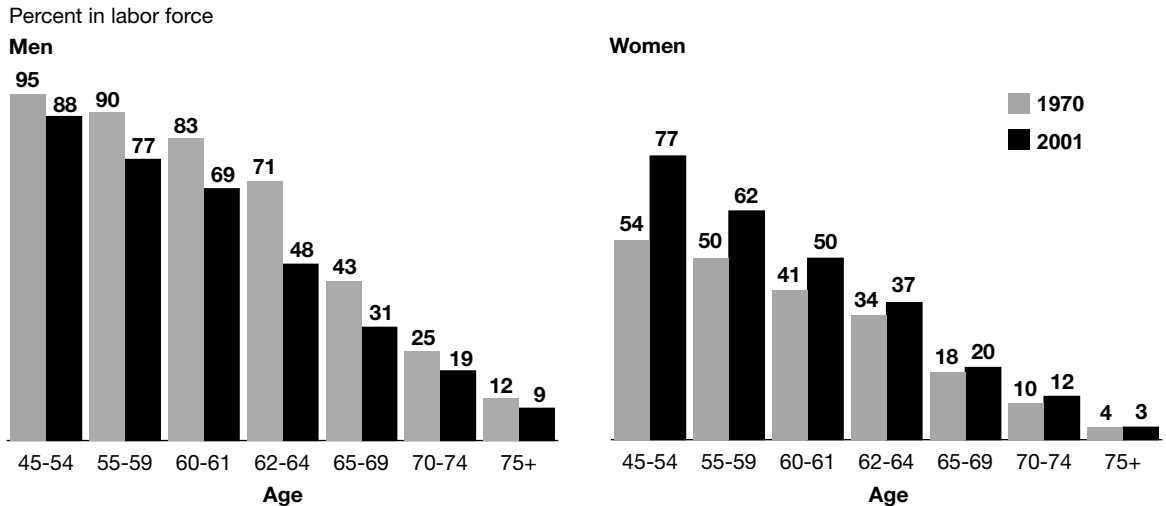
Employment, like the family, is one of the principal organizing features of modern society. Our economy is structured around employment and much of our educational system is geared toward training for employment. Employment in the paid labor force is an increasingly universal experience for both men and women. Retirement—the exit from the paid labor force—has become one of the major transitions of adulthood. Changes in the U.S. economy have had profound effects on work and retirement in later life. Large corporations encourage early retirement as a way to reduce their labor costs. An increasing reliance on technology has changed the skills needed for employment and lessened the value of older employees. When older workers lose their jobs they have a harder time finding new jobs.

In recent decades, Americans have left the labor force at earlier ages than in the past. Male labor force participation has declined at all ages over time, but particularly for those in their early 60s. Less than one-half of men ages 62 to 64 were in the labor force in 2001, compared with 88 percent of men ages 45 to 54 (see Figure 8, page 28). At the same time, labor force participation rates for older women have increased, although they still remain below the rates for men.

*About one-half of nursing home residents are cognitively impaired.*

Figure 8

## Labor Force Participation for Selected Age Groups, Men and Women, 1970 and 2001



Source: PRB analysis of March supplements to the Current Population Survey, 1970 and 2001.

Between 1970 and 2001, the percentage of women ages 60 and 61 who worked outside the home increased from nearly 41 percent to nearly 50 percent. At a time when large numbers of men were leaving the labor force for retirement or disability, more women than ever were becoming active participants in the paid labor force. Since the 1950s, women have spent an increasing share of their adult lives in paid employment. At younger ages the differential between male and female employment is rapidly disappearing, and it may disappear eventually among older men and women as well.

Participation in paid work is still uncommon after age 65. People who continue to work past age 65 are more likely to be self-employed. Self-employed workers may lack pension benefits and they may continue to work out of economic necessity, but their experience may also be more highly valued than that of other workers. Older workers who have made large investments in education—in professional occupations, for example—are also less likely to leave the work force early.<sup>45</sup> Older workers are also overrepresented in agriculture because fewer younger workers are

entering that occupation. Nearly 70 percent of all farmers were age 45 or older in 1998; the median age of farmers was 53 years.<sup>46</sup> Farmers and other self-employed workers also may be less likely to report themselves as “retired” when they reach older ages, in part because the definition of retirement is less clear for the self-employed.

Two characteristics usually define retirement: nonparticipation in the paid labor force and the receipt of income from pensions, Social Security, or other retirement plans. Other indicators of retirement may be departure from the major job of adulthood or a significant reduction in the number of hours worked. Age 65 has long been considered the normal retirement age in the United States, and 65 has been the age for becoming eligible for most pensions. Many workers had few options for retiring before or after that age. Throughout the 1980s, however, public and private retirement plans gradually began to provide for both earlier and later retirement ages. The introduction of Individual Retirement Accounts allowed workers to access retirement savings at age 59½, which allowed some people to retire earlier. At the same time, later retirement has been encouraged by legisla-

tion that protects older workers from age discrimination and eventually by new Social Security laws that incrementally increase the age when workers can get full benefits.<sup>47</sup>

The definition of retirement as nonparticipation in the labor force is becoming more nebulous as increasing numbers of workers leave one profession or job, and receive retirement income from that job, and then go to work in a new profession or job. Other people retire from full-time work, but continue to work part-time to supplement pension and Social Security income.

Retirement itself is a relatively recent development as a social institution. It only became possible when societies produced economic surpluses sufficient to support a nonemployed population, which coincided with increases in average life expectancy. As this economic surplus grew, governments developed plans to transfer that surplus to the nonworking population through pensions and government transfers. At the same time, society began to accept the concept that people could voluntarily stop working when they became older without becoming a financial burden. Social roles emerged for retired people. Attitudes toward retirement gradually evolved, and now retirement is viewed as an acceptable and expected life transition.

Retirement serves an important role in the management of economic resources. It allows for the orderly exit of people from the labor force and opens work opportunities for younger workers. Companies regularly use early retirement incentives to remove older, more highly compensated workers from their payrolls when they want to cut back their work force or to make room for less-costly younger workers. The age for receipt of full Social Security government and pension eligibility affects the decisions of individuals to retire and helps control the supply of labor. The Social Security system regularly manipulates the benefit structure to influence labor force participation. Increases in the minimum age to

receive full benefits have encouraged some workers to stay in the labor force until their mid-60s. At the same time, workers between the ages of 65 to 69 faced tax penalties for continuing to earn incomes until tax laws were changed in 2000.

The number of years spent in retirement has steadily increased as individuals retire earlier and live longer.<sup>48</sup> The average age when workers first receive Social Security benefits, for example, fell steadily from age 68.7 in 1950 to age 63.6 in 1985. The average hovered near that level through the 1990s. The average age for women to start getting benefits followed a similar pattern: It fell from 68.0 years in 1950 to 63.6 years in 1999.<sup>49</sup> Retirement age has fallen to younger ages for African Americans than for whites in recent decades.<sup>50</sup>

The retirement decisions of the baby-boom generation will have a profound effect on the size and shape of the labor force. In 1950, 46 percent of men age 65 or older were in the labor force. This percentage steadily declined to less than 19 percent in 2001. Among women, however, the rate has been lower and more consistent—between 9 percent and 10 percent—for the last 50 years. The retirement of the baby boomers could exacerbate an already tight labor supply, especially in education, public administration, and farming, which currently have large numbers of older workers and fewer younger workers entering. For occupations with decreasing demand, such as sewing machine operators, attrition through retirement may be beneficial because it could prevent layoffs of younger workers. In other occupations—health services, for example—the retirement of baby boomers will come at a time of increasing demand for their services.

## **Volunteering**

American society values the economic contributions of workers and tends to downplay the productive roles that older citizens play outside the labor force. Retired people often provide

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*Today's elderly Americans spend relatively few hours on volunteer activities, but they are increasingly courted by nonprofit organizations.*

care for family members and friends and run volunteer activities in their communities, as well as maintain their own homes.<sup>51</sup> Less than 30 percent of older men and women regularly work as volunteers and, on average, older men and women spend less than two hours a week on volunteer activities.

Many civic organizations view older Americans as a valuable resource, with the time and expertise that can benefit their communities. Several organized efforts tap into the desire of many older persons to contribute their time and efforts to community work.<sup>52</sup> One of these is Senior Corps, part of the federally funded Corporation for National Service. The Senior Corps includes the Foster Grandparent program, in which low-income individuals age 60 and over work with children who have special needs, including physical disabilities and learning problems. The Senior Companion program matches older adults with frail elderly who need personal care, and the Retired and Senior Volunteer Program (RSVP) helps older adults use their professional skills as volunteers in a variety of settings, including education, the justice system, or home maintenance.

Another volunteer program for older Americans is the Service Corps of Retired Executives (SCORE) program, sponsored by the U.S. Small Business

Administration, which helps people interested in starting a small business. The National Park Service sponsors the Volunteers in Parks (VIP) program, which welcomes older volunteers.

Many civic, religious, and educational organizations are reaching out to older Americans to fill volunteer roles previously occupied by women, many of them highly educated, who did not work outside the home. As women spend more years in the paid labor force, they have less time for volunteering. More organizations that rely on volunteers see retired Americans as filling that void. And, many elderly people are exploring the benefits of volunteer activity and the range of opportunities open to them after they leave paid employment.

## Income and Poverty

The financial well-being of older Americans has never been better than it is now, and a significant number of older Americans are quite wealthy. But older Americans are found at all income levels, and many live near or below the poverty level. The economic situation of older individuals reflects the opportunities and obstacles they have faced throughout life, and disadvantaged minorities, less educated people, and women generally have fewer resources when they enter their older years.

The economic resources of older Americans are often compared to a three-legged stool supported by personal savings, private pensions, and Social Security benefits. This image, promoted by the Social Security Administration, emphasizes that Social Security is just one part, not the sole source, of retirement income (see Box 3 on page 32). Current earnings by older Americans can also be an important source of income, which could be considered the “fourth leg” of a stool.

Nevertheless, Social Security is the primary source of income for the elderly in the lowest income brackets (see Table 6). Social Security benefits comprise 82 percent of all income for those in the lowest fifth of incomes in



1998, and just 18 percent of income for those in the highest income bracket. Elderly with higher incomes get relatively more income from savings and private pensions. Earnings provide nearly one-third of the income for elderly in the highest income brackets, underscoring the economic benefits of continuing to work.

### Savings and Assets

In 1999, median net worth—the value of savings, real estate, stocks, and other assets after deducting debts—was \$157,600 for elderly households.<sup>53</sup> Over the past 20 years net worth has increased among the elderly and declined among nonelderly, an indicator that elderly Americans have enjoyed especially good economic times in recent decades. Because most elderly earn little wage income, median net worth is an important indicator of their financial well-being. Assets provide an important cushion for the economic shocks that often accompany health problems, loss of a job, or widowhood.

The homes that elderly people own constitute a significant proportion of their net worth. Home equity accounted for 74 percent of median net worth among Americans age 65 or older in 1995, compared with 41 percent for households headed by an individual under age 35.<sup>54</sup> Approximately 75 percent of Americans age 65 or older own their own homes, and the majority of those have paid off their mortgages. Many of these homes have appreciated in value—enhancing net worth—but the value tied up in a home is less liquid than other types of assets and harder to call on in times of financial need. When home equity is subtracted from net worth estimates, median net worth falls dramatically. In 1995, median net worth of elderly households fell from \$92,000 to \$24,000 when the value of home equity was excluded.<sup>55</sup>

While net worth for elderly households increased, households headed by African Americans and by elderly people with lower levels of education have lower net worth than other elderly

Table 6

### Sources of Income Among Americans Age 65 or Older, by Income Level, 1998

Source of income	Income level				
	Lowest fifth	Second fifth	Third fifth	Fourth fifth	Highest fifth
Total (percent)	100	100	100	100	100
Social Security	82	80	64	45	18
Asset Income	2	6	10	14	28
Pensions	3	7	15	24	21
Earnings	1	3	7	13	31
Public Assistance	10	2	1	z	z
Other	2	2	3	3	2

z: Less than 1 percent.

Source: Federal Interagency Forum on Aging-Related Statistics, *Older Americans 2000: Key Indicators of Well-Being* (2001): table 8B.

households. In 1999, elderly households headed by a person with some college education had a net worth nearly five times that of households headed by a person without a high school diploma. Median net worth for black households headed by an older person was \$13,000 in 1999, compared with \$181,000 for white elderly households.<sup>56</sup>

### Pensions

Pensions tied to previous employment account for about 10 percent of income of elderly households, according to the Social Security Administration. A pension is a contract between an employer and employee under which the employer promises to provide regular payments to a worker after he or she leaves employment, typically beginning at retirement age. Pensions became common only after the 1940s. By 1950, only about 25 percent of people employed by private companies were covered by employer pensions. Pension coverage peaked in the mid-1980s when about 50 percent of those employed by private firms were covered. Pension coverage is much higher in the public sector: Nearly 90 percent of those employed by state and local governments are covered by pensions.

Pension plans are of two types. First is the defined benefit plan, which promises a defined amount of income for the remainder of a for-

mer employee's life. The amount of the benefit may depend upon the number of years a person has worked for that employer, the average salary or wages during their working years, or some combination of both. Some plans include annual cost-of-living increases, but increases are usually

not fully indexed to inflation. As retirees age, they may find the value of their pension income shrinking.

The second type of pension plan is a defined contribution plan. Under this type of plan employers, employees, or both, contribute money to a retirement fund while the employee

### *Box 3*

## **Is There a Social Security Crisis?**

The impending retirement of the huge baby-boom generation has caused policymakers to question whether the U.S. Social Security system can meet the benefit demands in the future. Historically, the retirement benefits administered by the Social Security Administration (SSA) largely have been financed through taxes paid by current workers. The financial health of the system is sensitive to the ratio of retirees to workers—sometimes called the old-age dependency ratio or support ratio. Because most baby boomers are working and their generation is so much larger than the population now receiving retirement benefits, more than enough Social Security taxes were collected than were paid out in recent decades. The surplus tax revenues were invested in a trust fund that will be tapped by the baby boomers when they retire beginning around 2010.

As the baby-boom cohorts retire and are replaced by the smaller baby-bust cohorts, the old-age dependency ratio will increase. The ratio of persons age 65 or older for each 100 persons ages 18 to 64 is projected to rise sharply from about 21 in 2010 to 28 in 2020 and to 36 by 2030.<sup>1</sup>

Will the Social Security system be able to handle this rapid demographic transition? The prognosis is considerably different depending on assumptions about the interest earned on the trust fund, the growth rate of the economy, unemployment rates, future life expectancy, and marriage and childbearing patterns. Social Security actuaries estimate that between 2013 and 2019 the cost of paying benefits will exceed the amount raised by taxes on current workers.<sup>2</sup> At that time, the SSA will tap into the trust fund to continue paying full benefits, until the trust fund is depleted some 20 to 25 years later.

Even if the trust fund is exhausted, payroll taxes from current workers would cover 75 percent of the benefits owed to Social Security recipients. But there is considerable debate about how to make up the difference, and on the exact nature and extent of changes needed at the SSA. Some advocate for an overhaul of the system, while others suggest that “tinkering” may be sufficient. In 1996, the Advisory Council on Social Security proposed several possible changes to the system. The incremental reforms fall into five major categories:<sup>3</sup>

- Reduce the benefits owed to workers by using a different method to calculate the monthly benefits.
- Increase income taxes on social security benefits.
- Increase the flow of payroll taxes into social security by expanding coverage to state and local employees currently not paying into Social Security.
- Accelerate the increase in the age for obtaining full benefits from 65 to 67. This would reduce the amount paid out under the system and expand the years a worker pays into the system.
- Change the cost-of-living index to slow annual increases in benefits.

The Advisory Council estimated that implementing all of these changes would eliminate about 70 percent of the projected shortfall. The remaining shortfall would require additional changes. One possible solution is to invest part of the trust fund in the stock market with the expectation of earning a higher return: Current regulations restrict investments to safe but low-earning U.S. government securities. Advocates note that stock-market investing would be inexpensive and require no

is working. The amount of the benefit to be received during retirement depends upon the amount contributed during the working years, earnings on those contributions, and the type of pension benefit payout chosen. The 401(k) plan is the most popular of these types of pension

plans: About one-half of all American workers are eligible to participate in a 401(k). One attraction of the 401(k) and similar plans is their “portability”: Workers can take the retirement savings to a new job. Another benefit is the ability to borrow against 401(k) funds to finance

alteration in the current benefit structure. Others argue, however, that making the government a stockholder in American companies may open the door for political interference by business interests. The uncertainty of the stock market is also of concern. If the market returns are not as high as expected, future generations will be responsible for making up the difference.

Another suggestion for reducing the pressure on the system is means-testing retirement benefits; that is, reducing or eliminating benefits to retirees who have substantial private pensions, savings, and other sources of retirement income. Means-testing would preserve benefits for lower-income retirees who rely heavily upon Social Security. But critics point out that means-testing would alter the system from one that benefits all workers to a system targeted to low-income workers. Such a change could undermine the political viability of Social Security by reducing the clout and numbers of people with a stake in the program. The task of examining individuals’ incomes to determine eligibility would increase administrative costs to the system, and the income maximums would create an incentive for some retirees to file fraudulent income statements.

The most dramatic proposals, perhaps, are to privatize the Social Security system. Under most privatization plans, future retirees would receive a guaranteed minimum benefit from the government, but would also receive a payment based on earnings in a personal security account (PSA). Both the government benefits and private accounts would be financed by mandatory payroll taxes. The minimum benefit, however, would be significantly

lower than the benefit received by current low-income retirees. The additional amount received from the PSA would depend upon the performance of the account, which the worker would control. Critics of privatization caution that those who invest poorly could receive substantially less than under the current system, and many older people could fall into poverty as a result. Taxpayers would bear the costs.

Another major issue surrounding privatization is how to phase in the program for those near retirement age. The transition costs could be enormous, and require tax increases for current workers to pay benefits to current retirees while contributing to their own PSAs.

Most experts agree that changes in the system are inevitable to preserve what is one of the largest and most popular domestic programs in the United States. As decisions are made about the future, the principles of individual equity and social adequacy will need to be balanced to provide a program that is fiscally sound and beneficial to all.

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Table 7

**Social Security Beneficiaries, December 2000**

Type of beneficiary	Number (in thousands)	Percent
Total with benefits	45,417	100
Retired workers and dependents	31,761	70
Workers	28,506	63
Spouses and children	3,255	7
Disabled workers and dependents	6,675	15
Workers	5,036	11
Spouses and children	1,639	4
Survivors of deceased workers	6,981	15

Source: Social Security Administration, *Social Security Bulletin—Annual Statistical Supplement 2001*: table 5.A4 ([www.ssa.gov/statistics/Supplement/2001/5a.pdf](http://www.ssa.gov/statistics/Supplement/2001/5a.pdf), accessed Sept. 27, 2001).

***Home equity  
accounts for  
about three-  
fourths of the  
net wealth  
of elderly  
Americans.***

education, to buy a home, and to cover other selected expenses.

In 1993, participants in defined contribution plans outnumbered those in defined benefit plans for the first time. This shift has worried many economists and retirement specialists who fear it may leave many workers with insufficient retirement incomes. The defined contribution plans are often voluntary. Workers with lower incomes and who are many years from retirement age may choose not to forgo any of their current income to contribute to a pension plan. In addition, the ability to borrow against retirement savings may create lower returns if the income is not repaid.

In addition to 401(k)s and other employer-sponsored plans, workers who are self-employed or whose employers do not have a pension plan have a variety of options for setting aside savings to provide retirement income. Most of these plans offer some type of tax incentives. One of the most popular is the Individual Retirement Account, or IRA. IRAs allow workers to set aside a set amount of income each year into special accounts that they normally would not access until they are nearly 60. The tax benefits of IRAs vary depending on an individual's income level and coverage by other pension plans. Like 401(k)s, IRAs depend upon voluntary contributions by individuals and are not likely to provide a security net for low-income workers.

**Social Security**

Social Security, initiated in 1935, was part of the New Deal plan to stimulate the U.S. economy during the Great Depression. Social Security programs are a type of social insurance. Workers contribute to the system during their careers and earn entitlement to benefits upon death, disability, or retirement. The Social Security system also serves to redistribute income, since lower-income workers receive more benefits relative to their contribution than do higher-income workers. In this sense, the system tries to balance two competing demands: equity and adequacy.

The principle of individual equity would insist that people get back from the system an amount proportional to what they contributed. Social adequacy, however, would give lower-income retirees a larger proportion to compensate for their smaller personal savings and lack of private pensions.

Social Security benefits are funded by a combination of taxes on workers and their employers. The system is referred to as a pay-as-you-go system in which current benefits are funded through current taxes. Since 1983, the taxes collected have gone into a trust fund that distributes benefits owed to retirees and invests any remaining funds in government bonds. In 2002, the employer and employee will pay 6.2 percent of an employee's earnings (up to a maximum of \$84,900) to finance the retirement, survivor, and disability portions of the Social Security system. Earned income above \$84,900 will not be taxed. Medicare, the health insurance program for the elderly, takes an additional 1.5 percent of the total earnings of both employers and employees.

Social Security has grown into a massive system providing benefits to more than 45 million persons (see Table 7). Most (63 percent) beneficiaries are retired workers, but many recipients are younger. About 15 percent of beneficiaries are survivors of deceased workers, and 11 percent

are the spouses and children of disabled and retired workers. Finally, 11 percent of beneficiaries are disabled workers who can no longer participate in the labor force. Until recently, full benefits were paid to workers who reached the age of 65, but the age at which full benefits are paid is gradually increasing. Those reaching age 62 in 2001 will be eligible for full benefits at age 65 and 4 months. By 2022, the age of full benefits will have reached age 67. In addition, a worker must have worked a total of 10 years in a job (or a succession of jobs) covered by the Social Security system to qualify for benefits.

The average monthly benefit paid to a retired worker in 2000 was just over \$800. Disabled workers received a somewhat smaller average monthly benefit, \$754. Although there is no minimum benefit amount, a worker who had worked continuously at low wages and retired at age 62 in January 2000 would have received a monthly benefit of \$518. In contrast, a worker who had continuously earned at or above the maximum taxable earnings and retired at age 65 would have a monthly benefit of \$1,433.

Supplemental Security Income (SSI) is an important source of income for some elderly, although most SSI recipients are under age 65. SSI began in 1974 and replaced state-financed programs of assistance for low-income elderly, blind, or disabled people. Unlike Social Security benefits, eligibility for SSI is means-tested; that is, it is available only if income and assets fall below a set level. In 1999, nearly 6.6 million people received SSI benefits. Only 20 percent of recipients received benefits based on their age, and 31 percent of all recipients were age 65 or older. The proportion of recipients who are elderly has steadily declined since the program's inception, partly because Social Security benefits to the elderly during that same time period pushed their incomes too high to be eligible. The SSI program benefits elderly women more than elderly men: Seventy-two

Table 8

### Poverty Rates Among Elderly Men and Women, by Race and Ethnicity, 2000

Population age 65+	Percent in poverty			
	Total, ages 65+	Non-Hispanic white	Black	Hispanic
Total, age 65+	10.2	8.3	22.3	18.8
Men	7.5	5.8	17.1	17.6
Women	12.2	10.2	25.8	19.6

Source: U.S. Census Bureau, "Age, Sex, Household Relationship, Race and Hispanic Origin: Poverty Status of People by Selected Characteristics in 2000" ([http://ferret.bls.census.gov/macro/032001/pov/new01\\_001.htm](http://ferret.bls.census.gov/macro/032001/pov/new01_001.htm), accessed Oct. 4, 2001).

percent of the 2 million elderly recipients in 1999 were women.

### Economic Security

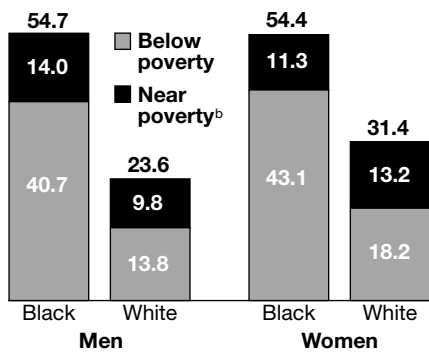
Social Security and pension income are at historic highs, and net worth of elderly Americans is increasing. These indicators present a rosy picture of the financial well-being of elderly Americans. In 2000, 10 percent of those age 65 or older were below the poverty threshold (see Table 8), a significant improvement from the 35 percent poverty level measured in 1959. The greatest improvements in the economic status of the elderly occurred between 1965 and 1974, when cost-of-living increases were added to Social Security benefits. The poverty rate for the elderly now closely matches that of adults ages 18 to 64. During the 1990s, the poverty rate declined among the elderly, although elderly Americans in extreme poverty, defined as those with incomes less than 50 percent of the poverty threshold, hovered around 2 percent throughout the period.

Poverty rates are much higher among some elderly groups. The chances of falling below the poverty line increase with age. In 2000, 8.9 percent of those ages 65 to 74 were poor, compared with 11.7 percent of those ages 75 or older. The older elderly are more likely to have spent down savings and assets to supplement Social Security and pension income.

Figure 9

### Poverty Rates of Elderly Men and Women Who Live Alone: White and African American, 2000

Percent of population age 65 or older<sup>a</sup>



<sup>a</sup> Black includes Hispanics.

<sup>b</sup> Incomes up to 25 percent above the poverty threshold.

Source: U.S. Census Bureau, "Age Sex, Household Relationship, Race and Hispanic Origin by Ratio of Income to Poverty Level, 2000" ([http://ferret.bls.census.gov/macro/032001/pov/new02\\_001.htm](http://ferret.bls.census.gov/macro/032001/pov/new02_001.htm), accessed Oct. 2, 2001).

In addition, health problems and health care needs increase with age, which can cut into savings.

Poverty rates are higher for women than men. In 2000, 12.2 percent of women age 65 or older were poor, compared with 7.5 percent of men. Elderly women are less likely than men to have had jobs that qualified them to collect the maximum Social Security benefits, to be eligible for private pensions, or to have accumulated wealth. The financial well-being of many women is closely tied to that of their husbands, and the death of a spouse can drastically alter their financial resources. Widows may receive Social Security benefits based on their husband's earnings, but these benefits are only two-thirds of the benefit the couple received. In addition, most women do not receive benefits from a partner's pension. Divorced women are often unable to receive benefits from their ex-husband's pension.

Poverty among the elderly is higher among racial and ethnic minorities. Lifetime patterns of lower wages, fewer investment opportunities, and lower levels of education mean that, on average, nonwhites enter old age

with fewer resources than whites. African Americans have generally higher poverty rates than whites or Hispanics. For those 65 or older, poverty rates reached 22.3 percent for blacks and 18.8 percent for Hispanics.

Minority women who live alone have the highest poverty rates. In 2000, 43 percent of older black women who live alone fell below the poverty line and 11 percent had incomes just above poverty (see Figure 9). The situation was not much better for older black men.

The Social Security system is widely credited with reducing poverty among the elderly. Social Security kept an estimated 40 percent of elderly Americans out of poverty in 1999. Many elderly live just above the poverty line, however.<sup>57</sup>

These poverty figures may underestimate the financial hardship faced by elderly Americans. The official poverty line is lower for persons age 65 or older than for younger people, on the assumption that older people have lower living expenses. But some analysts argue that these figures are too low; the official figures do not consider, for example, the higher medical costs borne by the elderly.

Increasing longevity may also strain the economic resources of the older population. Some older people will outlive their savings. Older people who have savings and investments may see the value of their resources eroded by inflation. Cost-of-living adjustment to pensions often lag behind inflation, leaving older people with less disposable income.

Historically, medical costs, especially prescription drug costs, have consumed a disproportionate share of expenses for the elderly. These costs have risen faster than the general inflation rate. Similarly, lower interest rates adversely affect the elderly since many invest in relatively safe bonds or bank CDs with rates of return that are tied directly to federal interest rates.

Other changes are likely to influence economic security in the future. Women traditionally have relied upon the earnings of their husbands for eco-

conomic security in old age. Declining rates of marriage mean that fewer women will be eligible for spousal retirement benefits in the future. While women's work force participation is increasing, they typically have fewer years of work experience, lower earnings, and are more likely to hold jobs with no pension coverage. Current elderly have seen the value of their real estate holdings increase dramatically over their lives, but further increases are unlikely in most U.S. regions. How these various trends combine will partly determine the future economic security of the baby-boom generation.

## The Future

As individuals, we age along a unique path of experiences and choices. At the same time, the society around us is aging as well. Societal aging affects all aspects of social life, from the experiences of individuals to the nature of social institutions. An increasing proportion of our society will be over age 65 in the next several decades. The entry of millions of Americans into old age will have implications for families, health care, education, and the economy.

Families will have more, but smaller, generations. Marriage, divorce, and remarriage patterns will alter the structure of families. Families will have fewer children as potential caregivers and a larger proportion of those younger family members will be employed. The obligation adult children feel to care for step-parents and noncustodial parents is unclear. At the same time, the opportunities to have relationships with grandparents and great-grandparents will increase.

As the older population itself ages, health care needs are likely to increase. While the age at which functional limitations are encountered may increase, increasing longevity may still mean that several years of life are spent with some chronic disease and disability. Better treatment of chronic conditions will mean even longer survival with disease, but will this increase

be years of functional independence? A declining work force will strain the ability of the health care industry to provide services at a time when needs are increasing.

The increased educational attainment of the older population may lead to better health and greater economic security. This group may also be interested in continuing lifelong learning through traditional educational institutions and alternative educational programs. As the school-age population declines, educational institutions can reach out to students in "nontraditional" ages, offering them further professional training, new careers, or enriching activities. The role of student could become less age-segregated and help break down the age norms for traditional social roles.

The workplace will also be altered by the aging of the population. Trends toward early retirement may change as Social Security benefits are targeted to older ages, or as norms about retirement change. The possibility of starting a second career late in life becomes realistic as life expectancy increases. Individuals may move from education to work, back to education, and then again to a new type of work. Technological advances may make it easier to work later in life and open new opportunities for those looking for new careers. Are the young-old an untapped resource? Perhaps this age group will become a new source of volunteer assistance to communities, churches, and schools.

Each generation must reinterpret the meaning of aging. We can predict a great deal about the future social and economic situation of the elderly based on what we know about the present. But the very aging of such a large group of people is likely to fundamentally change the very nature of that phase of the life course. Our society is just beginning to face the complex issues involved in an aging society. We cannot anticipate the changes needed by looking backward; the population aging we are facing in the next several decades is unprecedented. We must look forward.

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### Websites

- U.S. Census Bureau: [www.census.gov](http://www.census.gov)  
This site provides information on the population size, age structure, and geographic distribution based on the decennial censuses of the United States. The site also has links to particular Census publications on the older population.
- National Center for Health Statistics: [www.cdc.gov/nchs](http://www.cdc.gov/nchs)  
This site provides information on vital statistics and special reports on the health status of older Americans.
- Social Security Administration: [www.ssa.gov](http://www.ssa.gov)  
This site provides basic information on the Social Security system and reports on the financial stability of the system.
- Gerontological Society of America: [www.geron.org](http://www.geron.org)  
This is the major professional organization for gerontologists in academia.
- Association for Gerontology in Higher Education: [www.aghe.org](http://www.aghe.org)  
This site for the educational unit of the Gerontological Society of America provides information for educators and students on careers in aging, teaching materials, and colleges and universities offering programs in gerontology.

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