

Chapter 3.

Longevity and Health Characteristics

Longevity and Causes of Death

Trends in Life Expectancy and Survival

Most People Live to See Their 65th Birthday

Reductions in mortality have resulted in impressive increases in life expectancy that have contributed to the growth of the older population, especially at the oldest ages. This is in contrast to the early days of our nation when high fertility and high mortality kept the nation “young.” Life expectancy at birth was about 35

years when this nation was founded¹ and had increased to perhaps 42 years by the mid-1800’s.² By 1900, average life expectancy at birth had increased to 47 years (table 3-1). Life expectancy continued to increase dramatically in the first half of the 20th century, primarily because of

decreased mortality among the young, particularly infants. Under the mortality conditions of 1950, life expectancy at birth had jumped to 68 years. Since then, improvements have slowed. Nevertheless, in 1991, life expectancy at birth had reached a record high of 75.5 years.

¹ Life expectancy at birth is defined as the average number of years a person would live given the age-specific mortality rates of a specified year or period. In this chapter, life expectancy is shown also by sex, race, and at selected ages, 65 to 85.

² Irene B. Taeuber and Conrad Taeuber, U.S. Bureau of the Census, *People of the United States in the 20th Century*, U.S. Government Printing Office, Washington, DC, 1971, pp. 497-499.

Gender and Racial Gaps in Life Expectancy at Birth Persist

From 1900 to 1991, life expectancy at birth increased from 46 years for men to 72 years; for women, the increase was from 48 years to nearly 79 years. Life expectancy at birth has more

Table 3-1.

Life Expectancy at Birth, at 65 Years, and at 75 Years, by Race and Sex: Selected Years, 1900-02 to 1991

(Data are based on the National Vital Statistics System)

Age and year	All races			White		Black	
	Both sexes	Male	Female	Male	Female	Male	Female
Remaining life expectancy in years							
At birth							
1900-1902 ^{1 2}	47.3	46.3	48.3	46.6	48.7	³ 32.5	³ 33.5
1950 ²	68.2	65.6	71.1	66.5	72.2	58.9	62.7
1960 ²	69.7	66.6	73.1	67.4	74.1	60.7	65.9
1970	70.8	67.1	74.7	68.0	75.6	60.0	68.3
1980	73.7	70.0	77.4	70.7	78.1	63.8	72.5
1991	75.5	72.0	78.9	72.9	79.6	64.6	73.8
At 65 years							
1900-1902 ^{1 2}	11.9	11.5	12.2	11.5	12.2	10.4	11.4
1950 ²	13.9	12.8	15.0	12.8	15.1	12.9	14.9
1960 ²	14.3	12.8	15.8	12.9	15.9	12.7	15.1
1970	15.2	13.1	17.0	13.1	17.1	12.5	15.7
1980	16.4	14.1	18.3	14.2	18.4	13.0	16.8
1991	17.4	15.3	19.1	15.4	19.2	13.4	17.2
At 75 years							
1980	10.4	8.8	11.5	8.8	11.5	8.3	10.7
1991	11.1	9.5	12.1	9.5	12.1	8.7	11.2

¹ Death registration area only. The death registration area increased from 10 States and the District of Columbia in 1900 to the coterminous United States in 1933.

² Includes deaths of nonresidents of the United States.

³ Figure is for the Black and other races population.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 27.

than doubled for Blacks since 1900, from 33 years (for Blacks and “Other” races combined) to 69 years in 1991. For Whites, the increase was from 48 years to 76 years. In the past few decades, the most dramatic mortality reductions among the elderly have occurred among women and among the oldest old.

Survival of the Young

Eighty Percent of Newborns Would Survive to Age 65 Under the Mortality Conditions of 1991

Even as late as 1900, most people did not survive to old age, and few needed to worry about financing many years of retirement. In 1900, about 1 in 5 White children and 1 in 3 children of Black and other races died before their fifth birthday. Now, depending on sex and race, only 1 or 2 of every 100 children die before age 5 years. Under the mortality conditions of 1900, 41 percent of newborns would survive to age 65 (figure 3-1) compared with 80 percent under the mortality conditions of 1991.³

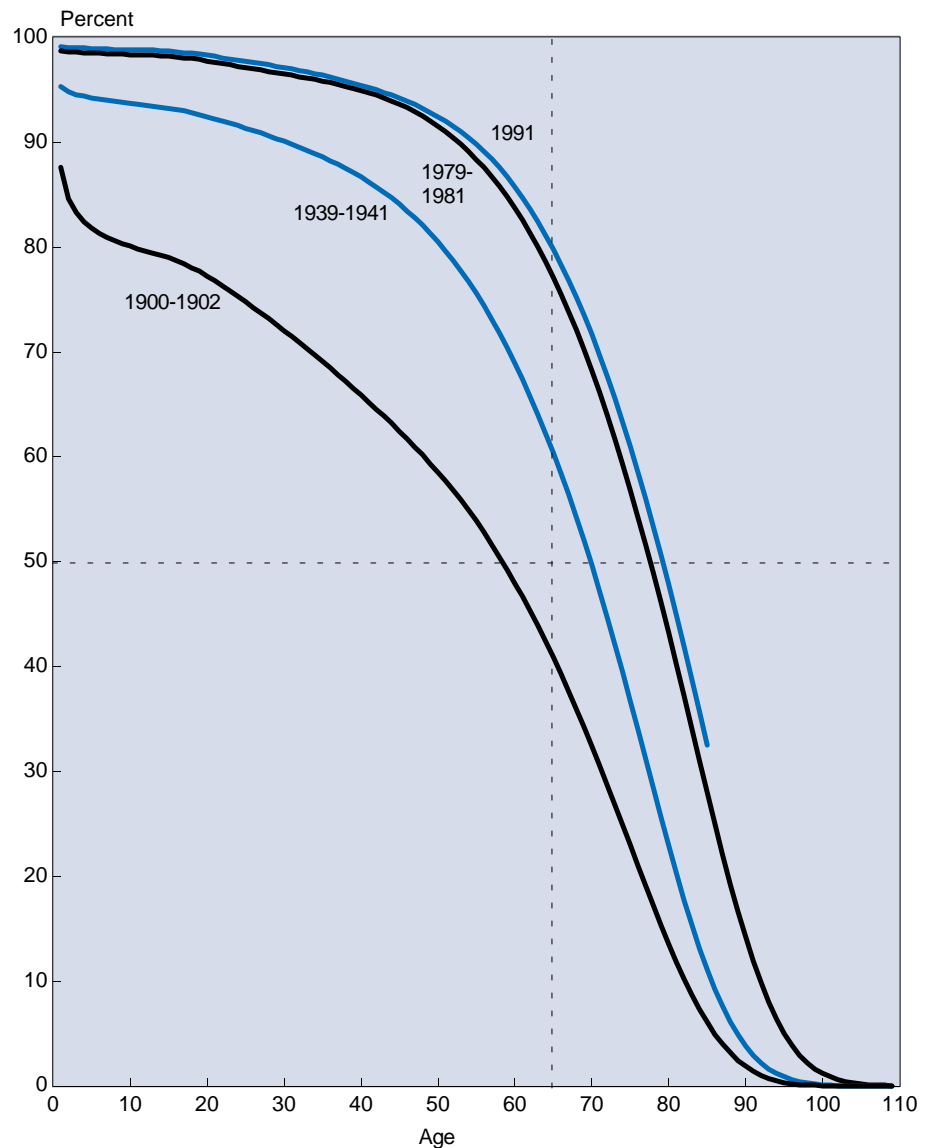
Survival of the Elderly

Improvements in Life Expectancy at Age 65 Have Been Greatest Among White Men in the 1980s

The gains in remaining years of life at age 65 have been less dramatic than among the young. The average expectation of additional years of life at age 65 increased by 46 percent

Figure 3-1.

Percent of Persons Surviving to Each Exact Age According to Life Tables: 1900-02 to 1991



Source: Data for 1901-1902 from U.S. Bureau of the Census, *United States Life Tables 1890, 1901, 1910, and 1901-1910*, 1921, table 1; 1939-1941 data are from *United States Life Tables and Actuarial Tables 1939-1941*, 1946, table 1; 1979-1981 data are from National Center for Health Statistics: *United States Life Tables, U.S. Decennial Life Tables for 1979-1981*, Vol. 1, No. 1, DHHS Pub. No. (PHS) 85-1150-1, Public Health Service, 1985, table 1, U.S. Government Printing Office, Washington, DC; data for 1991 are from Public Health Service, National Center for Health Statistics, unpublished data from Interpolated Abridged Life Table, 1991.

³ The long-term effect of acquired immunodeficiency syndrome (AIDS) on life expectancy is unclear but recent data suggest that average proportions of infants (both White and Black) surviving to age 65 have continued to increase.

Table 3-2.
**Average Number of Years of Life Remaining at Selected
Ages by Sex and Race: 1991**

Exact age	Male		Female	
	White	Black	White	Black
At birth	72.9	64.6	79.6	73.8
65	15.4	13.4	19.2	17.2
70	12.3	10.9	15.5	14.1
75	9.5	8.7	12.1	11.2
80	7.2	6.7	9.1	8.6
85	5.3	5.1	6.5	6.3

Source: National Center for Health Statistics, unpublished tabulations from abridged 1991 life tables.

Table 3-3.
Life Expectancy at 85 Years by Sex and Race: 1900-1902 to 1991

(Average number of additional years of life remaining)

Year	Male		Female	
	White	Black	White	Black
1900-1902	3.8	4.0	4.1	5.1
1909-1911	3.9	4.5	4.1	5.1
1919-1921	4.1	4.5	4.2	5.2
1929-1931	4.0	4.3	4.2	5.5
1939-1941	4.0	5.1	4.3	6.4
1949-1951	4.4	5.4	4.8	6.2
1959-1961	4.3	5.1	4.7	5.4
1969-1971 ¹	4.6	6.0	5.5	7.1
1979-1981 ¹	5.1	5.7	6.3	7.2
1991 ¹	5.3	5.1	6.5	6.3

¹ Deaths of nonresidents of the United States were excluded beginning in 1970.

Source: National Center for Health Statistics, 1900-1971 from *Vital Statistics of the United States 1978*, Volume II-Section 5, Life Tables. 1979-1981 from *U.S. Decennial Life Tables for 1979-1981*, Volume I, No. 1, U.S. Life Tables. 1991 data from unpublished abridged life table tabulations, the National Center for Health Statistics.

between 1900-1902 and 1991 (from 11.9 years to 17.4 years). Over this long period, the gain among the elderly was 7.0 years for White women, 5.8 years for Black women, 3.9 years for White men, and 3.0 years for Black men (table 3-1).

In the decade of the 1980s, improvements in life expectancy at age 65 have centered primarily on White men

(table 3-1). They have registered continuous gains since 1980 when life expectancy at age 65 was 14.2 years and increased to 15.4 years by 1991 (that is, White men age 65 would be expected to live to age 80.4 under the mortality conditions of 1991). For Black men, the gain was less, from 13.0 years to 13.4 years. In fact, life expectancy at age 65 for Black men has declined from an earlier estimate

for 1989 (when Black men age 65 were estimated to live an additional 13.6 years, on average). Life expectancy at age 65 for White women was 0.8 years higher in 1991 than in 1980. For Black women, the 1991 level was only 0.4 years higher. Both White and Black women would have nearly two decades of life remaining at age 65 under the mortality experience of 1991 (19.2 years for White women; 17.2 years for Black women).

Survival of the Oldest Old

White Women Are the Most Likely to Live to Age 85

White women are the most likely to live to age 85 years. Under the mortality conditions of 1991, among those who survive to age 85, White women have the highest level of life expectancy. At age 85, White women would live an additional 6.5 years compared with 6.3 years for Black women. White men at age 85 would survive 5.3 years compared with 5.1 years for Black men (table 3-2). Just as for life expectancy at birth, at age 85 years both White and Black women can still expect to live longer than men.

These estimates of life expectancy at the oldest old ages by race represent a departure from past relationships. That is, data since 1900 have shown a "Black-White crossover" in life expectancy at the oldest ages, with Black life expectancy at age 85 exceeding the corresponding level for Whites of both genders (table 3-3). Recent research by Elo and Preston⁴ has argued that the observed Black-White crossover in mortality experience at older ages results from

⁴ Irma T. Elo and Samuel H. Preston, "Estimating African-American Mortality from Inaccurate Data," *Demography*, Vol. 31, No. 3, August 1994.

errors in the data for Blacks at the oldest ages. Other research leans toward the conclusion that the crossover is real.⁵

In general, surviving to age 65 is much more common nowadays, although considerable variation still exists among various population subgroups. Under the mortality conditions of 1979-81, 80 percent of Whites and Hispanics would survive to age 65. By comparison, 66 percent of Blacks and 71 percent of American Indians would survive to that age.⁶ Of those who live to age 65, one-fourth would survive to age 90 under the mortality conditions of 1979-81 (decennial life tables for 1989-91 are not yet available) compared with only one-eighth in 1949-51 (figure 3-2). The Census Bureau population projections' middle series mortality assumption implies that by the middle of the next century, over 40 percent of persons age 65 years can expect to live to at least age 90.

⁵ Mary N. Haan, "Are Older Blacks Really Hardier? Differences in Mortality and Risk Factors in Older Blacks and Whites," *Ethnicity and Disease*, forthcoming.

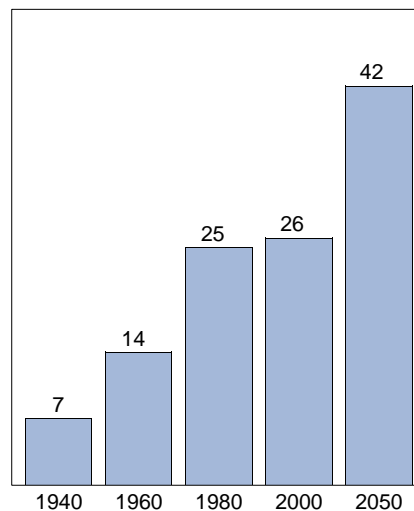
⁶ National Center for Health Statistics, U.S. Decennial Life Tables for 1979-81, Vol. I, No. 1. Public Health Service. U.S. Government Printing Office, Washington, DC, August 1985. Unpublished life table values for Hispanics from Greg Spencer, Population Division, Bureau of the Census. Life table values for American Indians and Alaskan Natives from Aaron Handler, Indian Health Service, American Indian and Alaskan Native Life Expectancy, 1979-81, for 28 reservation States (which include 67 percent of American Indians) for 1979-81.

World's Highest Life Expectancy

Hong Kong and Japan Have World's Highest Life Expectancy

Among countries with at least one million population, life expectancy at birth in 1994 is projected to be highest in Hong Kong and Japan. Under the mortality conditions of 1990, life

Figure 3-2.
Percent of Persons Age 65 Expected to Survive to Age 90: 1940 to 2050



Source: 1940 to 1980 from National Center for Health Statistics, decennial life tables; 2000 and 2050 from unpublished life tables consistent with *Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1993 to 2050*, Current Population Reports, P25-1104, U.S. Government Printing Office, Washington, DC, 1993.

expectancy at birth for Japanese women is 82.5 years. The United States ranks 23rd among the countries of the world in estimated levels of life expectancy at birth in 1994. Under 1990 mortality conditions, Japanese women at age 65 could expect to live an additional 20.6 years, implying that Japanese women who survive to age 65 would live to age 85.6, on average (table 3-4). By comparison, men age 65 years in the U.S. in 1990 could expect to live an additional 15.1 years (or to age 80.1), and women age 65 an additional 18.9 years (or to age 83.9).

Number of Deaths and Death Rates

About 7 in 10 Deaths Occur to People Aged 65 or Older

During 1991, nearly 2.2 million people died in the United States; of these, nearly 1.6 million were elderly: with 0.5 million aged 65 to 74, 0.6 million were aged 75 to 84, and 0.5 million aged 85 and older (table 3-5).⁷ In the future, analysts expect the proportion of deaths at older ages to increase, especially after age 85. While 22 percent of all deaths occurred in 1991 at ages 85 and over, this percentage is expected to continue to increase for the next several decades. Under the Census Bureau's middle series

⁷ National Center for Health Statistics, *Monthly Vital Statistics Report*, Vol. 42, No. 2(S), August 31, 1993, Hyattsville, MD: Public Health Service, table 2.

Table 3-4.
Life Expectancy at Birth and at 65 Years of Age by Sex: Selected Countries, 1985 and 1990

(For meaning of abbreviations and symbols see introductory text)

Country ¹	Life expectancy at birth		Life expectancy at 65 years		Country ¹	Life expectancy at birth		Life expectancy at 65 years	
	1985 ²	1990 ³	1985 ²	1990 ³		1985 ²	1990 ³	1985 ²	1990 ³
Male					Female				
Japan.....	75.0	76.2	15.8	16.5	Japan.....	81.0	82.5	19.5	20.6
Sweden.....	73.8	74.8	14.7	15.5	France.....	80.1	81.8	19.4	20.7
Israel.....	73.6	74.6	15.1	15.6	Switzerland.....	80.4	81.0	19.3	19.7
Greece.....	73.5	74.6	15.3	15.8	Sweden.....	79.9	80.8	18.7	19.4
Canada.....	73.1	74.0	14.9	15.5	Canada.....	80.0	80.8	19.5	19.9
Switzerland.....	73.5	74.0	15.0	15.3	Spain.....	79.7	80.5	18.4	19.2
Netherlands.....	73.1	73.9	14.1	14.4	Italy.....	78.8	80.4	17.7	19.0
Italy.....	72.2	73.6	14.0	15.0	Netherlands.....	79.9	80.3	18.9	19.2
Norway.....	72.6	73.4	14.4	14.6	Norway.....	79.6	79.9	18.6	18.7
Spain.....	73.1	73.4	15.0	15.5	Australia.....	78.7	79.8	18.2	19.1
France.....	71.8	73.4	14.9	16.1	Greece.....	78.5	79.8	17.4	18.3
Australia.....	72.2	73.2	14.2	15.0	Austria.....	77.4	79.2	17.0	18.2
United Kingdom.....	71.3	73.0	13.2	14.1	Finland.....	79.0	79.0	17.7	17.9
Cuba.....	72.3	72.9	15.7	15.9	United States.....	78.2	78.9	18.5	18.9
Austria.....	70.4	72.6	13.6	14.7	United Kingdom.....	77.4	78.7	17.3	18.0
Costa Rica.....	72.0	72.5	14.2	14.4	Germany.....	(NA)	78.6	(NA)	17.7
Singapore.....	70.2	72.3	12.9	14.4	Belgium.....	77.8	78.2	17.5	17.8
Germany.....	(NA)	72.2	(NA)	14.0	New Zealand.....	76.9	78.1	17.3	18.1
Denmark.....	71.7	72.2	13.9	14.0	Israel.....	77.0	78.1	16.5	17.3
Belgium.....	70.8	72.0	13.3	14.1	Denmark.....	77.7	77.9	18.0	18.0
Ireland.....	70.8	72.0	12.8	13.2	Ireland.....	76.3	77.7	16.1	17.0
New Zealand.....	71.0	71.9	13.5	14.3	Singapore.....	75.6	77.5	15.9	17.2
United States.....	71.1	71.8	14.5	15.1	Costa Rica.....	74.5	77.4	17.3	17.2
Finland.....	70.5	71.0	13.4	13.8	Portugal.....	76.6	77.3	16.9	17.0
Portugal.....	69.5	70.1	13.6	13.8	Puerto Rico.....	77.2	77.2	17.3	17.5
Chile.....	67.4	69.4	12.9	14.0	Cuba.....	75.5	76.8	17.2	17.8
Puerto Rico.....	70.2	69.1	15.0	14.9	Chile.....	74.8	76.5	16.3	17.6
Bulgaria.....	68.3	68.2	12.6	12.8	Slovakia.....	(NA)	75.7	(NA)	16.1
Czech Republic.....	(NA)	67.6	(NA)	11.7	Lithuania.....	(NA)	75.7	(NA)	17.0
Slovakia.....	(NA)	66.7	(NA)	12.3	Poland.....	75.0	75.6	15.9	16.2
Romania.....	67.1	66.6	12.8	13.3	Czech Republic.....	(NA)	75.5	(NA)	15.3
Poland.....	66.8	66.5	12.5	12.5	Bulgaria.....	74.2	74.9	14.7	15.3
Lithuania.....	(NA)	66.0	(NA)	13.3	Estonia.....	(NA)	74.4	(NA)	15.8
Hungary.....	65.1	65.1	11.8	12.1	Latvia.....	(NA)	74.0	(NA)	15.8
Estonia.....	(NA)	64.1	(NA)	12.1	Hungary.....	73.2	73.8	15.1	15.4
Latvia.....	(NA)	63.5	(NA)	12.1	Russia.....	(NA)	73.4	(NA)	15.8
Russia.....	(NA)	62.8	(NA)	12.0	Romania.....	72.7	73.1	14.7	15.2

Note: Rankings are from highest to lowest life expectancy at birth in 1990 based on data for selected countries or geographic areas with at least 1 million population. This table is based on official mortality data from the country concerned, as submitted to the United Nations Demographic Yearbook, the World Health Statistics Annual, or as estimated/projected by the U.S. Bureau of the Census.

¹Refers to countries, territories, or geographic areas.

²Data for Costa Rica and United Kingdom are for 1983. Data for Belgium, Finland, Ireland, Chile, Romania, and Poland are for 1984.

³Data for Belgium are for 1986. Data for Costa Rica and Australia are for 1987. Data for Puerto Rico are for 1989.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 26; and U.S. Bureau of the Census, International Data Base.

Table 3-5.
Deaths and Death Rates by Age, Sex, and Race: 1991

(Rates per 100,000 population in specified group. For meaning of abbreviations and symbols, see introductory text)

Age	All races			White			Black		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Number									
All ages	2,169,518	1,121,665	1,047,853	1,868,904	956,497	912,407	269,525	147,331	122,194
Under 1 year	36,766	21,008	15,758	23,657	13,696	9,961	11,994	6,714	5,280
1-4 years	7,214	4,045	3,169	5,028	2,818	2,210	1,930	1,083	847
5-9 years	3,926	2,292	1,634	2,903	1,697	1,206	879	505	374
10-14 years	4,553	2,980	1,573	3,418	2,219	1,199	990	667	323
15-19 years	15,313	11,358	3,955	11,067	7,941	3,126	3,737	3,053	684
20-24 years	21,139	16,191	4,948	14,921	11,392	3,529	5,566	4,312	1,254
25-29 years	25,485	18,994	6,491	17,918	13,470	4,448	6,811	4,962	1,849
30-34 years	34,143	24,715	9,428	24,427	18,039	6,388	8,882	6,110	2,772
35-39 years	40,561	28,534	12,027	28,928	20,704	8,224	10,651	7,206	3,445
40-44 years	47,561	32,018	15,543	35,029	23,848	11,181	11,408	7,495	3,913
45-49 years	53,627	34,363	19,264	41,199	26,506	14,693	11,229	7,149	4,080
50-54 years	67,049	41,665	25,384	52,454	32,815	19,639	13,135	7,996	5,139
55-59 years	96,553	59,342	37,211	78,133	48,337	29,796	16,536	9,915	6,621
60-64 years	151,525	92,094	59,431	127,160	78,173	48,987	21,912	12,535	9,377
65-69 years	214,468	126,381	88,087	183,809	109,220	74,589	27,578	15,362	12,216
70-74 years	264,168	149,475	114,693	232,010	132,362	99,648	28,860	15,246	13,614
75-79 years	301,822	158,268	143,554	269,816	142,329	127,487	28,475	13,964	14,511
80-84 years	305,668	140,682	164,986	276,797	127,340	149,457	25,707	11,453	14,254
85 years and over	477,401	156,823	320,578	439,797	143,266	296,531	33,110	11,498	21,612
Not stated	576	437	139	433	325	108	135	106	29
Percent									
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 1 year	1.7	1.9	1.5	1.3	1.4	1.1	4.5	4.6	4.3
1-4 years	0.3	0.4	0.3	0.3	0.3	0.2	0.7	0.7	0.7
5-9 years	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3
10-14 years	0.2	0.3	0.2	0.2	0.2	0.1	0.4	0.5	0.3
15-19 years	0.7	1.0	0.4	0.6	0.8	0.3	1.4	2.1	0.6
20-24 years	1.0	1.4	0.5	0.8	1.2	0.4	2.1	2.9	1.0
25-29 years	1.2	1.7	0.6	1.0	1.4	0.5	2.5	3.4	1.5
30-34 years	1.6	2.2	0.9	1.3	1.9	0.7	3.3	4.1	2.3
35-39 years	1.9	2.5	1.1	1.5	2.2	0.9	4.0	4.9	2.8
40-44 years	2.2	2.9	1.5	1.9	2.5	1.2	4.2	5.1	3.2
45-49 years	2.5	3.1	1.8	2.2	2.8	1.6	4.2	4.9	3.3
50-54 years	3.1	3.7	2.4	2.8	3.4	2.2	4.9	5.4	4.2
55-59 years	4.5	5.3	3.6	4.2	5.1	3.3	6.1	6.7	5.4
60-64 years	7.0	8.2	5.7	6.8	8.2	5.4	8.1	8.5	7.7
65-69 years	9.9	11.3	8.4	9.8	11.4	8.2	10.2	10.4	10.0
70-74 years	12.2	13.3	10.9	12.4	13.8	10.9	10.7	10.3	11.1
75-79 years	13.9	14.1	13.7	14.4	14.9	14.0	10.6	9.5	11.9
80-84 years	14.1	12.5	15.7	14.8	13.3	16.4	9.5	7.8	11.7
85 years and over	22.0	14.0	30.6	23.5	15.0	32.5	12.3	7.8	17.7
Not stated	-	-	-	-	-	-	0.1	0.1	-

See footnotes at end of table.

Table 3-5.
Deaths and Death Rates by Age, Sex, and Race: 1991—Continued

(Rates per 100,000 population in specified group. For meaning of abbreviations and symbols, see introductory text)

Age	All races			White			Black		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Death Rates									
All ages ¹	860.3	912.1	811.0	886.2	926.2	847.7	864.9	998.7	744.5
Under 1 year ²	916.6	1,023.8	804.4	762.6	860.8	659.2	1,771.6	1,957.4	1,580.8
1-4 years	47.4	52.0	42.7	41.7	45.5	37.6	79.7	88.4	70.8
5-9 years	21.5	24.5	18.4	19.8	22.6	16.9	32.0	36.3	27.6
10-14 years	25.8	32.9	18.2	24.2	30.6	17.5	36.4	48.5	24.0
15-19 years	89.0	128.6	47.2	80.5	112.2	46.9	141.2	228.0	52.3
20-24 years	110.1	165.6	52.5	95.5	142.3	46.3	208.4	329.4	92.1
25-29 years	123.0	182.8	62.9	105.2	156.3	52.9	247.4	378.5	128.2
30-34 years	154.1	224.0	84.7	132.6	194.6	69.8	321.5	473.3	188.3
35-39 years	197.7	280.5	116.3	168.5	240.5	96.1	432.4	629.9	261.4
40-44 years	53.6	345.8	163.7	219.9	300.1	140.1	555.1	789.8	353.8
45-49 years	380.5	497.5	268.0	340.6	442.9	240.4	773.9	1,081.5	516.5
50-54 years	575.8	736.7	423.8	523.9	668.6	384.7	1,084.6	1,469.9	771.6
55-59 years	926.3	1,189.9	684.5	864.6	1,106.9	638.2	1,574.9	2,136.9	1,129.9
60-64 years	1,431.9	1,862.4	1,054.3	1,365.5	1,778.3	996.5	2,238.2	2,970.4	1,683.5
65-69 years	2,136.8	2,814.1	1,588.3	2,059.3	2,717.6	1,520.4	3,159.0	4,185.8	2,414.2
70-74 years	3,205.1	4,233.2	2,434.1	3,130.2	4,145.4	2,361.9	4,352.0	5,775.0	3,412.0
75-79 years	4,806.8	6,376.6	3,780.7	4,751.1	6,320.1	3,720.1	5,823.1	7,714.9	4,711.4
80-84 years	7,575.4	10,005.8	6,275.6	7,527.8	9,971.8	6,227.4	8,655.6	11,339.6	7,272.4
85 years and over	15,107.6	17,800.6	14,066.6	15,239.0	18,020.9	14,188.1	14,271.6	16,663.8	13,258.9

¹Figures for age not stated are included in "All ages" but are not distributed among age groups.

²Death rates under 1 year (based on population estimates) differ from infant mortality rates (based on live births).

Source: National Center for Health Statistics, *Monthly Vital Statistics Report*, Vol. 42, No. 2(S), August 31, 1993.

projections, the total number of deaths is expected to increase annually, reaching 3 million in 2024.⁸

The crude death rate for 1991 was 8.6 deaths per 1,000 population of all ages (or, equivalently expressed as 860.3 per 100,000 population).⁹ The age-adjusted death rate¹⁰ was 513.7 deaths per 100,000 population. From 1960 to 1991, death rates for the young old (persons aged 65 to 74) decreased by 31 percent (from 3,822 to 2,619 per 100,000 population). A smaller percent decrease of 24 percent occurred during this period for persons 85 years and over (from 19,858 in 1960 to 15,108 per 100,000 population in 1991).

Death Rates Are Higher for Men Than for Women

Men generally have higher death rates than women at every age. In

⁸ Jennifer Cheeseman Day, U.S. Bureau of the Census, *Projections of the Population of the United States, by Age, Sex, Race, and Hispanic Origin: 1993 to 2050*, Current Population Reports, P25-1104, Washington, DC, 1993, table 1.

⁹ Throughout the remainder of this chapter, all death rates are expressed as per 100,000 resident population.

¹⁰ Age-adjusted death rates control for changes and variations in the age composition of the population. They are better indicators than crude death rates for showing changes in mortality risk over time and for showing differences among race-sex groups.

fact, age-specific male death rates in 1991 ranged from 22 to 215 percent higher than corresponding death rates for females. Since 1960, death rates for persons aged 65 to 74 have decreased the least among Black men. Among White men aged 65 to 74, there were 4,848 deaths per 100,000 population in 1960 compared with 3,350 in 1991 (a 31-percent reduction). For Black men of that age, the death rates were 5,799 in 1960 and 4,851 in 1991 (a 16-percent reduction). Since 1960, death rates decreased about 30 percent among White and Black women aged 65 to 74 (rates per 100,000: White women, 2,779 in 1960 and 1,909 in 1991; Black women, 4,064 and 2,854 respectively).¹¹

Only among Black men do the majority of deaths occur before age 65 (table 3-5). According to data for 1991, 46 percent of Black men died at age 65 or older compared with 68 percent of White men. For Black women, 62 percent died at age 65 or older compared with 82 percent of White women. In 1991, 32 percent of deaths to White women occurred at

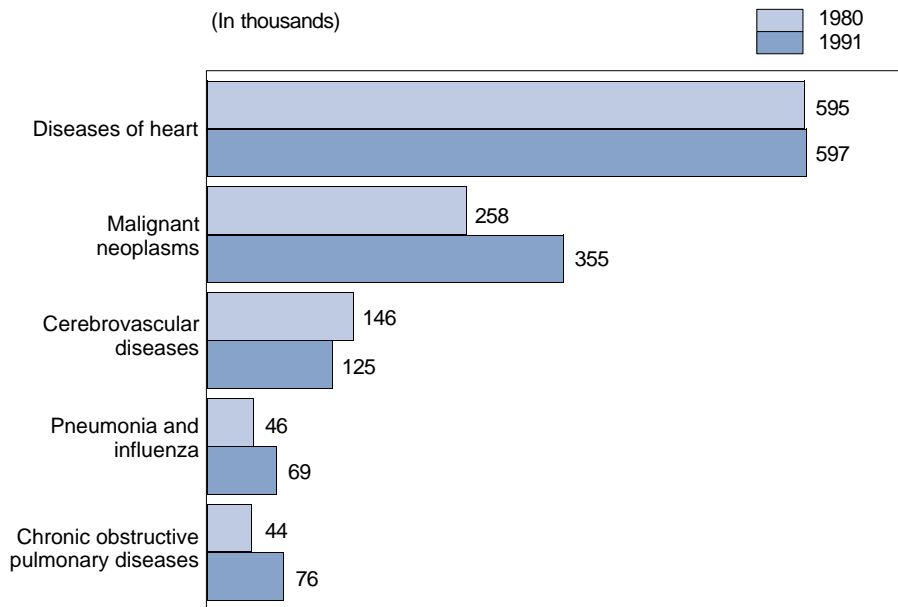
¹¹ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 41, (data for 1960 include deaths of nonresidents of the United States).

age 85 or older compared with only 8 percent of Black men, 15 percent of White men, and 18 percent of Black women.

Among people aged 85 years and over, reported death rates are lowest for Black women and highest for White men.¹² Comparing 1960 to 1991, death rates per 100,000 population 85 years and over were reduced for Whites, especially for White women. Black death rates at age 85 years in 1991 are reportedly greater in 1991 than in 1960. By race and gender, the 1960 to 1991 changes in death rates at age 85 were as follows: White men, from 21,750 to 18,021 (a 17-percent decrease); Black men, from 14,845 to 16,664 (an increase of 12 percent); for White women, from 19,478 to 14,188 (a 27-percent decrease); for Black women, from 13,053 to 13,259 (an increase of 2 percent).

¹² *Ibid.*, table 41. Death rates by race at the oldest ages may be subject to data quality problems. In particular, greater overstatement of age in censuses compared to reported age on death certificates may be factors that contribute to lower observed death rates at the oldest ages for Blacks than for Whites. As a result, the lower mortality of Blacks than Whites at the oldest ages may be due to data deficiencies. See Elo and Preston, 1994, *op. cit.*

Figure 3-3.
**Top Five Causes of Death for the
 Elderly: 1980 and 1991**



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 31.

Causes of Death

Heart Disease Is the Leading Cause of Death Among the Elderly

In 1980, three of four elderly deaths were from heart disease, cancer, or stroke. These three major causes of death still were responsible for 7 of

every 10 elderly deaths in 1991. Chronic obstructive pulmonary diseases and influenza and pneumonia are also important causes of death among the elderly.¹³

¹³ Ibid., table 31.

Heart disease is the leading cause of death within the elderly population (figure 3-3). The total number of deaths due to heart disease in 1991 was about the same as in 1980, at just under 600,000. Cancers, strokes, pneumonia and influenza, and chronic obstructive pulmonary diseases remained the other major causes of death of the elderly population.

Among those aged 65 to 74, heart diseases and cancers were equally prevalent as causes of death; each comprised about one-third of all deaths in that age group in 1991. As age advances, heart disease causes an increasingly larger share of deaths. Heart diseases were the cause of death in 1991 for 44 percent of those 85 years and older.¹⁴

Since the mid-1960's, there has been a consistent decline in deaths attributable to coronary heart disease (CHD). Death rates from CHD are highest among men but are declining more rapidly among White men than among other race-sex groups.

¹⁴ National Center for Health Statistics, *Monthly Vital Statistics Report*, Vol. 42, No. 2(S), August 31, 1993, Hyattsville, MD: Public Health Service, table 7.

Sempos et al.¹⁵ showed that from 1968 to 1975, the annual rate of decline in deaths due to CHD was about the same for White men, Black men, and Black women, but somewhat lower for White women. After 1976, the decline continued for the four groups but the rapid rate of decline observed in the 1968-to-1975 period continued only for White men.

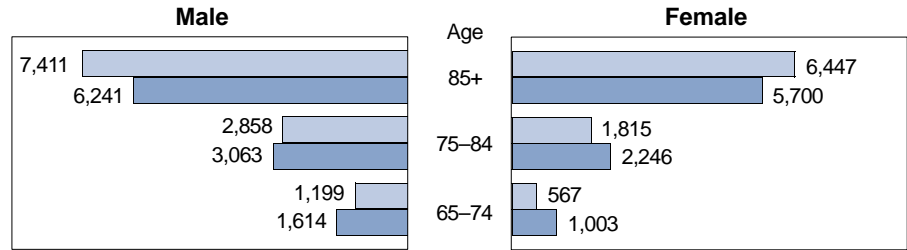
In 1991, among the young old and the aged (65 to 74 years and 75 to 84 years), Black men, followed by White men, had the highest rates of death from both heart disease (figure 3-4) and cancer (figure 3-5). For the 85-and-over group, death rates from heart disease were lower for Blacks than for Whites. Black death rates due to cancers were higher than the corresponding White death rates, even among the oldest old. The higher rate for Blacks among the oldest old is a reversal of the 1960 relationship (table 3-6). In 1991, for cerebrovascular diseases, Blacks had higher death rates than Whites until the oldest ages (figure 3-6).

Among persons aged 65 to 84 years, reported heart disease death rates for 1989-91 are lowest for Asian and Pacific Islanders, while among the population ages 85 years and over, the lowest rates are for American Indians and Alaskan Natives. These findings are in part attributable to inconsistencies in race identification between the underlying source populations (Census Bureau) and death certificate statistics (National Center for Health Statistics) used to calculate

¹⁵ C. Sempos, R. Cooper, M.G. Kovar, and M. McMillen, "Divergence of the Recent Trends in Coronary Mortality for the Four Major Race-Sex Groups in the United States," *American Journal of Public Health*, Vol. 78, No. 11, 1988, pp. 1422-1427.

Figure 3-4.
Death Rates for Diseases of Heart for Persons 65 Years and Over by Age, Sex, and Race: 1991

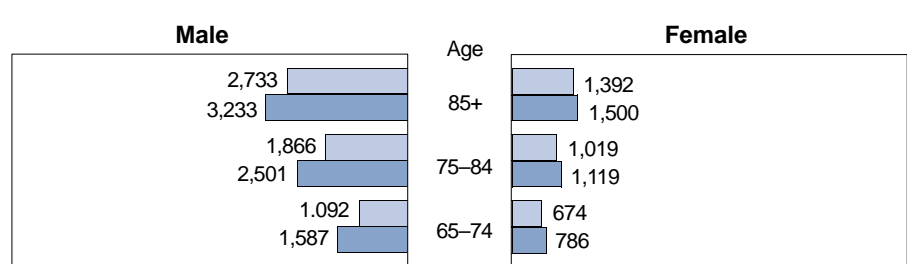
(Deaths per 100,000 resident population)



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 42.

Figure 3-5.
Death Rates for Malignant Neoplasms for Persons 65 Years and Over by Age, Sex, and Race: 1991

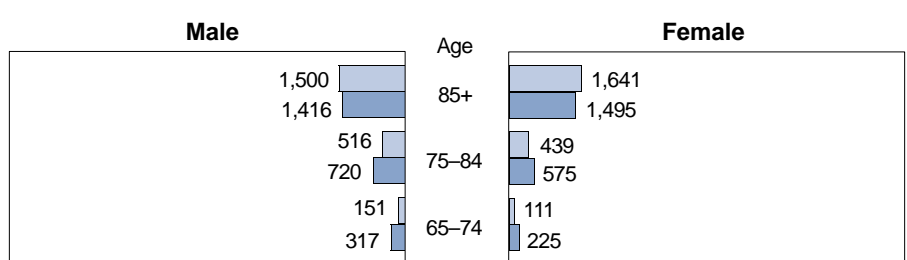
(Deaths per 100,000 resident population)



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 44.

Figure 3-6.
Death Rates for Cerebrovascular Diseases for Persons 65 Years and Over by Age, Sex, and Race: 1991

(Deaths per 100,000 resident population)



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 43.

Table 3-6.
**Death Rates for Diseases of the Heart and Malignant Neoplasms
 by Age, Race, and Sex: 1960 and 1991**

(Deaths per 100,000 resident population. Data are based on the National Vital Statistics System)

Cause of death, age, race, and sex	Deaths		Percent change, 1960 to 1991
	1960 ¹	1991	
Diseases of the Heart			
65 to 74 years			
White male	2,297.9	1,198.6	-47.8
Black male	2,281.4	1,614.3	-29.2
White female	1,229.8	567.4	-53.9
Black female	1,680.5	1,003.4	-40.3
75 to 84 years			
White male	4,839.9	2,858.2	-40.9
Black male	3,533.6	3,063.1	-13.3
White female	3,629.7	1,814.7	-50.0
Black female	2,926.9	2,246.0	-23.3
85 years and over			
White male	10,135.8	7,411.2	-26.9
Black male	6,037.9	6,240.6	3.4
White female	9,280.8	6,447.3	-30.5
Black female	5,650.0	5,700.0	0.9
Malignant Neoplasms			
65 to 74 years			
White male	887.3	1,091.5	23.0
Black male	938.5	1,587.2	69.1
White female	562.1	673.8	19.9
Black female	541.6	786.3	45.2
75 to 84 years			
White male	1,413.7	1,866.4	32.0
Black male	1,053.3	2,500.7	137.4
White female	939.3	1,018.7	8.5
Black female	696.3	1,118.5	60.6
85 years and over			
White male	1,791.4	2,733.0	52.6
Black male	1,155.2	3,233.3	179.9
White female	1,304.9	1,391.7	6.7
Black female	728.9	1,500.0	105.8

¹ Includes deaths of nonresidents of the United States.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, tables 42 and 44.

the rates.¹⁶ For Hispanic elderly, death rates for heart disease during 1989-91 were about 30 percent below that for White elderly.

Even though heart disease is the major killer of the elderly, there have been meaningful decreases in such death rates since 1960. The declines were largest for those aged 65 to 74 years and for Whites in all elderly age groups. Among the oldest old, Black men and Black women experienced a slight increase in death rates from heart disease (table 3-6).

Death rates from cancer have increased among the elderly since 1960. The increases are especially noticeable among Black men and, to a lesser extent, Black women. White women have had lower rates of increase than White men and Blacks, and especially lower rates of increase after age 75 (table 3-6).

Among persons aged 65 to 74 years, by race and Hispanic origin, cancer death rates in 1989-91 were lowest for Asian/Pacific Islanders (482 per 100,000). American Indian/Alaskan Natives had the lowest cancer death rates, by race and Hispanic origin (805 and 1,082 per 100,000, respectively), for persons aged 75 to 84

¹⁶ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 33. "Consistency of race and Hispanic origin identification between the death certificate (source of data for the numerator of death rates) and data from the Census Bureau (source of data for the denominator) is high for individual White, Black, and Hispanic persons; however, a person identified as American Indian or Asian in data from the Census Bureau is sometimes misreported as White on the death certificate, causing death rates to be underestimated by 22-30 percent for American Indians and by about 12 percent for Asians." (P.D. Sorlie, E. Rogot, and N.J. Johnson, "Validity of Demographic Characteristics on the Death Certificate," *Epidemiology*, Vol. 3, No. 2, 1992.)

years and for those aged 85 years and over.¹⁷ As with the heart disease death rates discussed previously, these findings are influenced by race identification inconsistencies between the underlying source population and death data used to calculate the rates.

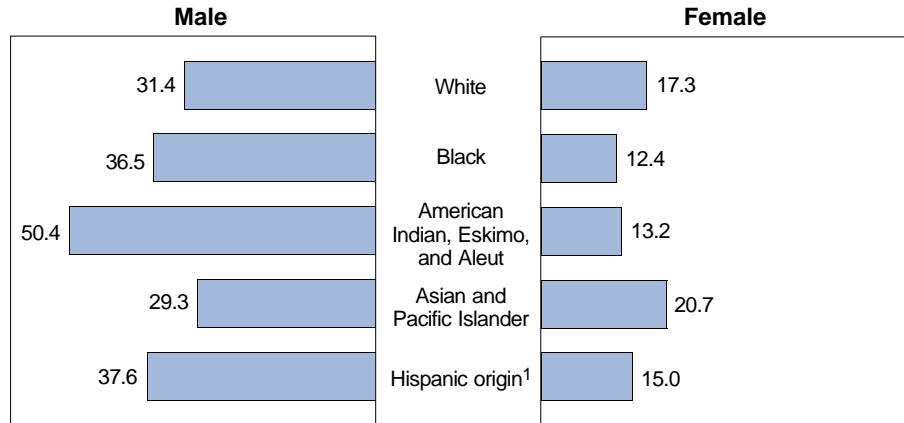
Elderly White Men More Likely to Commit Suicide Than to Die in a Motor Vehicle Accident

White, Black, and Hispanic origin men aged 65 years and over are 2 to 3 times as likely to die in a motor vehicle accident as the corresponding race/Hispanic origin women (figure 3-7). The pattern of higher motor vehicle accident death rates for males compared to females also is present for age groups under age 65 years. The male-female difference in death rates from motor vehicle accidents among the elderly is least for Asian and Pacific Islanders while the widest differential is observed for American Indian and Alaskan Natives.

Males ages 65 years and over are also much more likely to commit suicide than their female counterparts (figure 3-8). Elderly Black males and elderly Hispanic males have suicide rates 8 to 10 times as great as their female counterparts, respectively. Elderly White males have by far the highest suicide rates among the elderly population. Elderly White males are the only race/ethnic/gender group more likely to commit suicide than to die in a motor vehicle accident. The percent widowed ages 65 to 74 and the percent of unemployed males 65 and over have been shown to significantly contribute to the variation in the

Figure 3-7.
Death Rates for Motor Vehicle Accidents Among the Elderly by Race and Sex: 1989-91

(Deaths per 100,000 resident population)

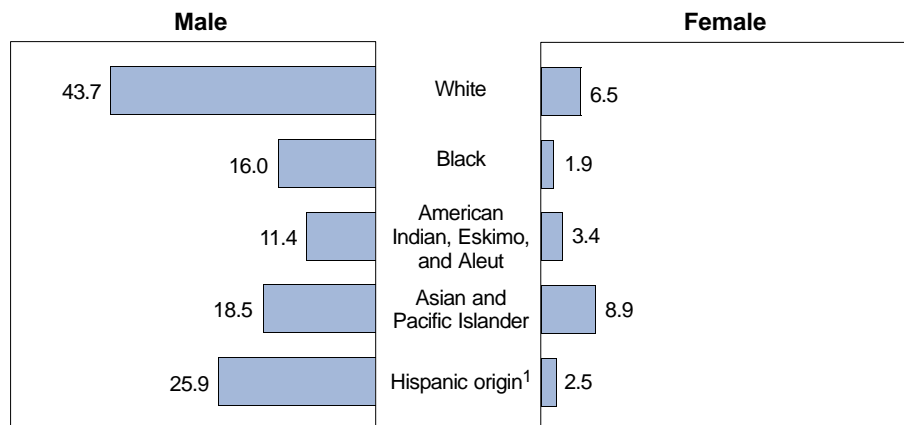


¹ Hispanic origin may be of any race.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 36.

Figure 3-8.
Death Rates for Suicide Among the Elderly by Race and Sex: 1989-91

(Deaths per 100,000 resident population)

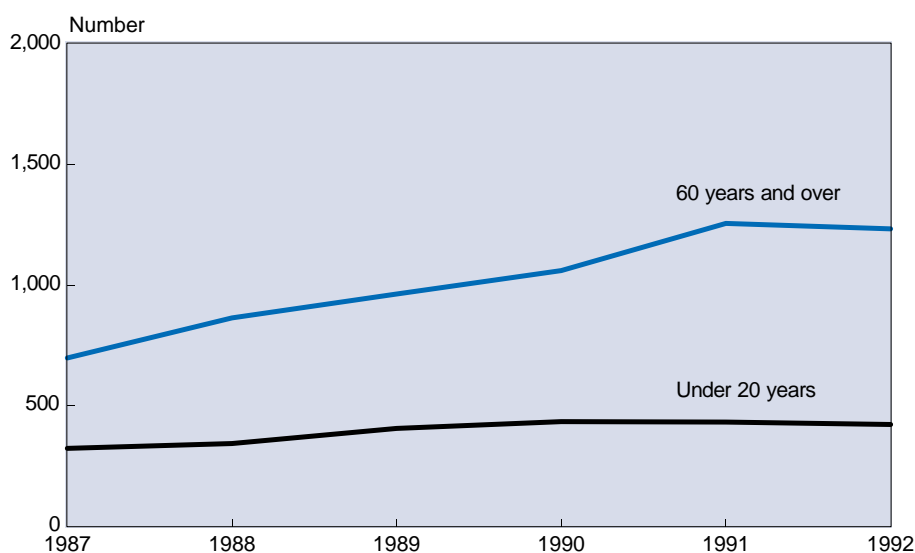


¹ Hispanic origin may be of any race.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 37.

¹⁷ Ibid., table 35.

Figure 3-9.
**AIDS Deaths Under 20 Years and 60 Years
 and Over: 1987 to 1992**



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 62.

White male suicide rate among the young old (65 to 74 years).¹⁸ Other research¹⁹ suggests that lower suicide rates for older women may result from older women possibly having more flexible and diverse coping strategies than older men and concludes that relationships, rather than work, are one important key to prevention of suicide in older men.

¹⁸ Patricia L. McCall and Kenneth C. Land, "Trends in White Male Adolescent, Young-Adult, and Elderly Suicide: Are There Common Underlying Structural Factors?" *Social Science Research*, Vol. 23, 1994, pp. 57-81.

¹⁹ Silvia Sara Canetto, "Gender and Suicide in the Elderly," *Suicide and Life-Threatening Behavior*, Vol. 22(1), 1992, pp. 80-97.

AIDS Kills More Elderly Than Children Each Year

In recent years, increased attention has been given to children dying of Acquired Immune Deficiency Syndrome (AIDS). Yet, in 1992, nearly three times as many persons aged 60 years and over died of AIDS as did persons under age 20 (over 1,200 compared to more than 400, figure 3-9). Between 1987 and 1992, the number of children who died of AIDS remained relatively stable. In contrast, the number of persons aged 60 years and over who died from AIDS nearly doubled during the five-year period, 1987 to 1992.

The death rate (per 100,000 resident population) attributed to human immuno-deficiency virus (HIV) infection for infants under age 1 year was the same (2.3) in 1991 as in 1987, while the rate for those aged 65 to 74 rose from 1.3 in 1987 to 2.4 in 1991. The death rates in 1991 for persons aged 1 to 4, 5 to 14, 75 to 84, and 85 and over were 1.0, 0.3, 0.9, and 0.3, respectively. By far the highest death rates from HIV infection remain in the ages from 25 to 54 years.²⁰

Implications

Increasing levels of life expectancy at birth and the shift to a larger proportion of all deaths occurring at the oldest ages have crucial implications for financing a long life even if medical science and changes in personal health practices somehow manage to make old age healthier.

As life expectancy continues to increase, issues arise about the quality of life of older people. The number of years of health in relation to the number of years of chronic illness are important (active life expectancy is discussed below). The financial soundness of retirement plans could be critical to an ever-larger proportion of the population.²¹ We may see more long-term chronic illness, disability, and dependency. At the same time, recent research findings of Manton, Stallard, and Corder indicate that chronic disability rates among the

²⁰ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 48.

²¹ Metropolitan Life Insurance, "New Longevity Record in the United States," *Statistical Bulletin*, Vol. 69, No. 3, 1988, p. 15.

elderly have declined and the prevalence of chronic disease conditions has dropped.²² More people may live long enough to suffer from the cognitive diseases of senile dementia and Alzheimer's disease. Larger numbers of informal caregivers are likely to be elderly, with women in their late sixties increasingly facing the stressful caregiving demands of a surviving parent or parent-in-law aged 85 and over.²³

Health and Disability Status

Many assume health among the elderly has improved because more are living longer. Others hold a contradictory image of the elderly as dependent and frail. Neither view is totally accurate. In one study examining frailty by analyzing deaths due to hunger and exposure among persons 60 years and over, hunger decedents were disproportionately older, White and female (supporting the "frail" stereotype), while the analysis of exposure deaths suggested that younger, male, and minority elderly were at greater risk.²⁴

Poor health is not as prevalent as many assume, especially among the young old. About three-fourths (74.3

percent in 1992) of noninstitutionalized persons aged 65 to 74 consider their health to be good, very good, or excellent compared with others their age as do about two-thirds (66.8 percent) of noninstitutionalized persons 75 years and over. Over the past two decades, the percent of the elderly population identifying their health as good, very good, or excellent has remained fairly consistent (69.8 percent in 1975 compared to 71.3 percent in 1992).²⁵ In a study of "healthy agers," (i.e., persons free of physical performance limitations, selected chronic conditions, limitations of daily activities, and who reported their health as very good to excellent in 1984), Rogers²⁶ found that perceived health was important. Even among persons without the chronic conditions or disabilities in the research model, people who considered themselves in poor health were more likely to die, and those who considered themselves in excellent health were more likely to live. Overall, Rogers estimated that life expectancy at age 55 for healthy agers was 32.5, implying a total life expectancy of 87.5 (83.2 years for males and 92.8 years for females).

Mortality is a limited measure of the health of a population. While more people live to the oldest ages, they may live their increased years with multiple illnesses and disabilities. As described above, heart disease, cancer, and stroke cause many deaths.

These diseases also contribute to chronic health problems and functional dependency. For example, doctors now save the lives of many who would have died from heart attacks in past years. The survivors often face the remainder of their years with chronic, limiting illness or conditions. Other elderly, especially women, have chronic diseases such as arthritis, diabetes, osteoporosis, senile dementia, and so forth. Among those 85 years and over in 1990, nearly 1 in 4 (24.5 percent) lived in a nursing home and many had serious health problems for which they required assistance.

Crimmins, Hayward, and Saito²⁷ have shown that the length of dependent life and the prevalence of disability are affected by changes in mortality and morbidity rates. Simulations based on mortality and morbidity change in the late 1980's indicate that mortality improvements increase the years and the proportion of dependent life, while morbidity improvements act in the opposite direction, reducing both the years and proportion of dependent life. Changing both mortality and morbidity together holds the relative length of dependent life essentially unchanged. Similarly, mortality improvement alone would increase the proportion of functionally dependent individuals, while morbidity improvement would lower this proportion. Their findings indicate that a longer expected life can be accompanied by worsening health.

²² National Institute on Aging, "Signs of Improving Health Among Older Americans Could Yield Cost Savings," by Carol J. De Vita, Population Reference Bureau, *Aging Today: Demographic News for Decisionmakers*, No. 3, 1995.

²³ Kenneth G. Manton and Beth J. Sol-do, "Disability and Mortality Among the Oldest Old: Implications for Current and Future Health and Long-term-Care Service Needs," Chapter 10 in *The Oldest Old*, Richard M. Suzman, David P. Willis, and Kenneth G. Manton (eds.), 1992, Oxford University Press.

²⁴ Susan M. Macey and Dona F. Schneider, "Frailty and Mortality Among the Elderly," *The Journal of Applied Gerontology*, Vol. 14, No. 1, 1995, pp. 22-32.

²⁵ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 71; and *Health, United States, 1982*, Hyattsville, MD: Public Health Service, 1982, table 27.

²⁶ Richard C. Rogers, "Sociodemographic Characteristics of Long-Lived and Healthy Individuals," *Population and Development Review*, 21(1), 1995, pp. 33-58.

²⁷ Eileen M. Crimmins, Mark D. Hayward, and Yasuhiko Saito, "Changing Mortality and Morbidity Rates and the Health Status and Life Expectancy of the Older Population," *Demography*, Vol. 31, No. 1, 1994, pp. 159-175.

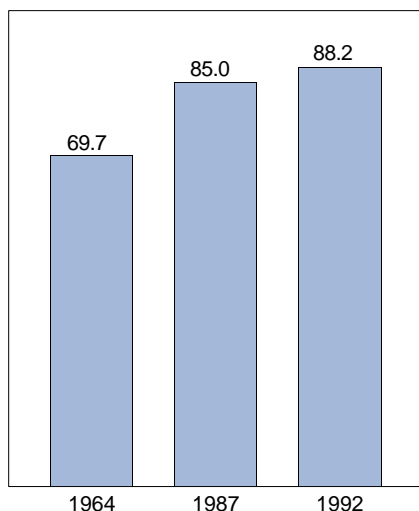
Habits

Nearly 9 of 10 Elderly Visited a Physician in the Past Year

The percentage of persons aged 65 years and over visiting a physician in the past year has increased considerably in the past several decades (figure 3-10). This may in part reflect the need for care among those at advanced ages combined with the increased average age of persons aged 65 years and over. The observed

Figure 3-10.

Percent of Elderly Visiting a Physician in the Last Year: 1964, 1987, and 1992



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 88.

Table 3-7.

Percent of Persons 65 Years and Over Who Smoked Cigarettes at Time of Survey by Sex and Race: 1965 to 1992

(Data are based on household interviews of a sample of the civilian noninstitutionalized population)

Year	Male			Female		
	All races	White	Black	All races	White	Black
1992 ¹	16.1	14.9	28.3	12.4	12.6	11.1
1990	14.6	13.7	21.5	11.5	11.5	11.1
1985	19.6	18.9	27.7	13.5	13.3	14.5
1979	20.9	20.5	26.2	13.2	13.8	8.5
1974	24.8	24.3	29.7	12.0	12.3	8.9
1965	28.5	27.7	36.4	9.6	9.8	7.1

¹ Data for 1992 are not strictly comparable with data for earlier years. Beginning in 1992 the definition of current smoker was modified to specifically include persons who smoked only "some days." Prior to 1992, a current smoker was defined by the questions "Have you ever smoked 100 cigarettes in your lifetime?" and "Do you smoke now?" (traditional definition). In 1992, data were collected for half the respondents using the traditional smoking questions, and for the other half of respondents using a revised smoking question ("Do you smoke everyday, some days, or not at all?"). An unpublished analysis of the 1992 traditional smoking measure revealed that the crude percent of current smokers age 18 and over remained the same as 1991. The figures shown for 1992 in this table combine data collected using the traditional and the revised questions. Future estimates of smoking prevalence will be based on the revised definition which is considered a more complete estimate of smoking prevalence.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 72.

increase also may reflect an increase in regular preventive care.

Elderly Black Men Twice as Likely to Smoke as White Men

Smoking has been associated with all three major causes of death (diseases of heart, malignant neoplasm, and cerebrovascular diseases). Men are more likely to smoke and to smoke more heavily than women. Men, however, are relatively more likely to have quit smoking than women. The prevalence of

smoking is lowest in the oldest age groups. In 1992, 16 percent of men aged 65 years and over smoked cigarettes compared with only 12 percent of women. Compared to 1965, the likelihood of smoking in their elder years has decreased among elderly men but increased among elderly women (table 3-7). Elderly Black men are about twice as likely as elderly White men to be a current smoker. Both Black and White women ages 65 years and over have similar proportions of current smokers.

Over Half of Elderly Men Are Current Alcohol Drinkers; Also About One-Third of Elderly Women

Alcohol consumption can have both beneficial and deleterious effects on longevity. The lower mortality risk of light to moderate drinkers results in a J-shaped alcohol-mortality curve.

While heavy drinkers are at higher mortality risk due to such conditions as liver cirrhosis, certain cancers, and hypertension, among others, the lower mortality risk of lighter drinkers is almost entirely due to less coronary heart disease.²⁸ Models based on data from the National Health and Nutrition Examination Survey (NHANES) and the NHANES I Follow-up indicate that White men who were moderate drinkers had a 3-4 percent longer life span than non-drinkers or light drinkers.²⁹

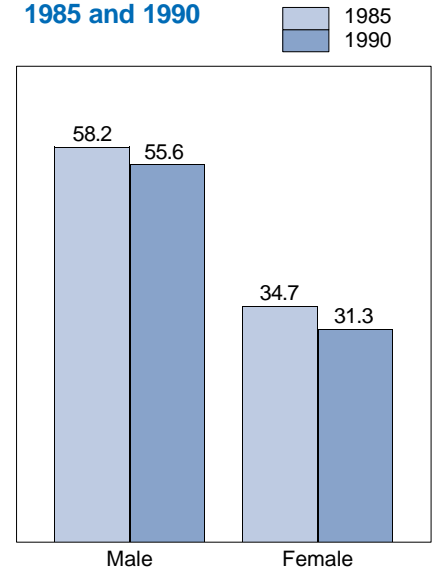
²⁸ Arthur L. Klatsky and Gary D. Friedman, "Annotation: Alcohol and Longevity," *American Journal of Public Health*, Vol. 85, No. 1, 1995, pp. 16-17.

²⁹ Douglas Coate, "Moderate Drinking and Coronary Heart Disease Mortality: Evidence from NHANES I and the NHANES I Follow-up," *American Journal of Public Health*, Vol. 83, No. 6, 1993, pp. 888-890.

Among adults, the percent who currently drink alcohol generally declines with age. Still, among persons ages 65 years and over in 1990, the majority of men consumed 12 or more drinks in a single year and at least one drink in the past year (i.e., were current drinkers), and about one-third of elderly females were current alcohol drinkers (figure 3-11). The proportion of current alcohol drinkers who are heavy drinkers (consumed 14 or more drinks per week) remains fairly stable for men, by age, at about 14 percent. Although the proportion of heavy drinkers among current drinkers for women is low across age groups, elderly women who are current drinkers are twice as likely to be heavy drinkers (6 percent) as are women aged 18 to 24 years (3 percent).³⁰

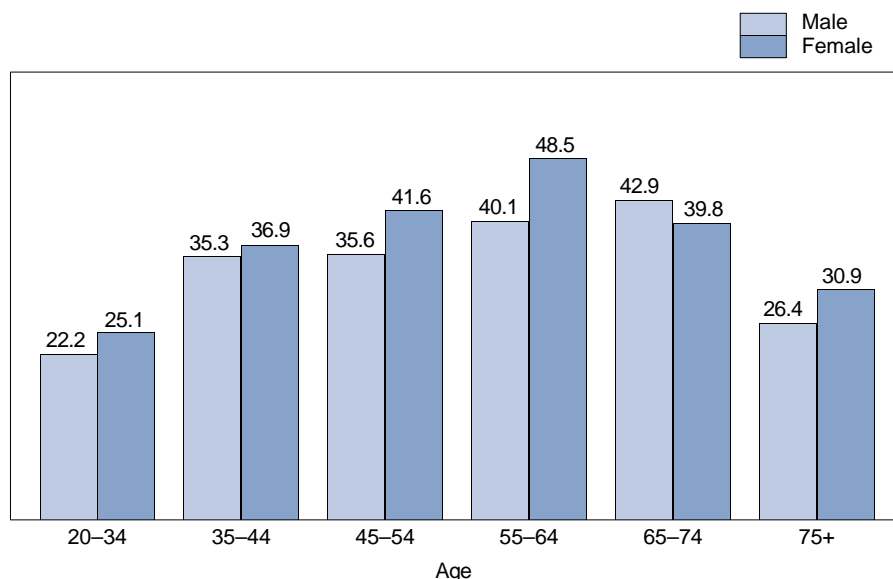
³⁰ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 77.

Figure 3-11.
Percent of Elderly Population Who Are Current Alcohol Drinkers by Sex: 1985 and 1990



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 77.

Figure 3-12.
Percent of Population Overweight by Age and Sex: 1988-91



Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 80.

Percent Overweight Among Elderly Declines With Age

The percent of the population classified as overweight in 1988-91 peaked for males in the age group 65 to 74, and dropped substantially for those 75 years and over (figure 3-12). The percent of females overweight peaked earlier, at ages 55 to 64, with declining percentages thereafter. A higher proportion of young old (65 to 74 years) males was overweight than young old females. This was the only age group for which the reported percentage overweight is greater for

males than females. The sharply reduced proportions who are overweight after age 64 for females and after age 74 for males might result from several factors. For example, mortality may be selectively higher for overweight persons, leaving a higher proportion of survivors at advanced ages who are not overweight. Other factors might be improved diet (perhaps due to increased contact with physicians, who may educate about food intake or increase fat and sugar restrictions due to existing health conditions or drug interactions), loss of appetite, or reduced ability to afford to consume as much food.

Chronic Illness

Chronic Illnesses Increase With Age and Are More Common Among Women

As chronological age increases, so too does the probability of having multiple chronic illnesses. A study by Guralnik et.al.³¹, found that the proportion of the population 60 years and older with two or more common chronic conditions (referred to as comorbidity) was higher for women than for men. For example, among those 80 years of age and older, 70 percent of the women and 53 percent of the men had two or more of the nine common conditions studied.

With increasing age, rates of hearing and visual impairments increase rapidly. In 1990, 48 percent of men 75 years and over and 37 percent of women (noninstitutionalized) had problems with hearing. Over three of five noninstitutionalized 75-and-older women and more than one in three of the men reported they had arthritis. For men 75 and over, the second most frequently reported chronic condition, after hearing impairment, was heart conditions (40 percent). For women in this age group, the second

³¹ Jack M. Guralnik, Andrea Z. Lacroix, Donald F. Everett, and Mary Grace Kovar, National Center for Health Statistics, *Aging in the Eighties: The Prevalence of Comorbidity and Its Association With Disability, Advance Data*, Number 170, 1989, p. 3. The study looked at nine common chronic conditions: arthritis, hypertension, cataracts, heart disease, varicose veins, diabetes, cancer (except nonmelanoma skin cancer), osteoporosis or hip fracture, and stroke.

ranked chronic condition, following arthritis, was hypertension.³²

Functional Limitations

Difficulty in performing personal care tasks and home management tasks are referred to as “functional limitations.” These are measures of ability to live independently and are used as indicators of the need for health services. The scale used to measure the ability to perform physical tasks related to personal care is called the Activities of Daily Living (ADL’s). Wiener et al.³³ assessed the variation among the numerous surveys that measure ADL’s. The ADL measures vary along several dimensions, including the number of activities considered and the degree of independence in performing physical activities. Most surveys include a list of eating, bathing, dressing, toileting, and getting in or out of a bed or chair. ADL’s do not cover all aspects of disability, however, and are not sufficient by themselves to estimate the need for long-term care. Some elderly have cognitive impairments not measured by ADL limitations. An additional commonly-used measure, called Instrumental Activities of Daily Living (IADL’s), measures more complex tasks. They usually include handling personal finances, preparing meals, shopping, doing housework, traveling, using the telephone, and taking medications.

There are substantial differences across 11 national surveys in the estimated size of the elderly population with ADL disabilities, as shown in the

³² U.S. Bureau of the Census, *Statistical Abstract of the United States: 1993*, Washington, DC, 1993, table 206, p. 135.

³³ J.M. Wiener, R.J. Hanley, R. Clark, J.F. Van Nostrand, “Measuring the Activities of Daily Living: Comparisons Across National Surveys,” *Journal of Gerontology*, Volume 45, No. 6, 1990, pp. S229-237.

study by Wiener et al. The various surveys have different purposes, use different lists of activities to measure limitations, and ask about the activities in different ways. Wiener et al. note that ADL estimates of the disabled are affected by whether they include those who can perform an activity if mechanical assistance is available. Despite the differences, the various surveys generally show similar trends among the elderly even though the reported levels are different.

The Need for Personal Assistance With Everyday Activities Increases With Age

The extent of need for personal assistance with everyday activities is an indicator of need for health and social services. Questions were asked in the 1990 and 1991 panels of the Survey of Income and Program

Participation (SIPP) of the civilian noninstitutionalized population about the need for personal assistance with everyday activities. Under the definition used in this study, McNeil³⁴ determined that 4.5 million elderly persons needed assistance with one or more activities (ADL’s).

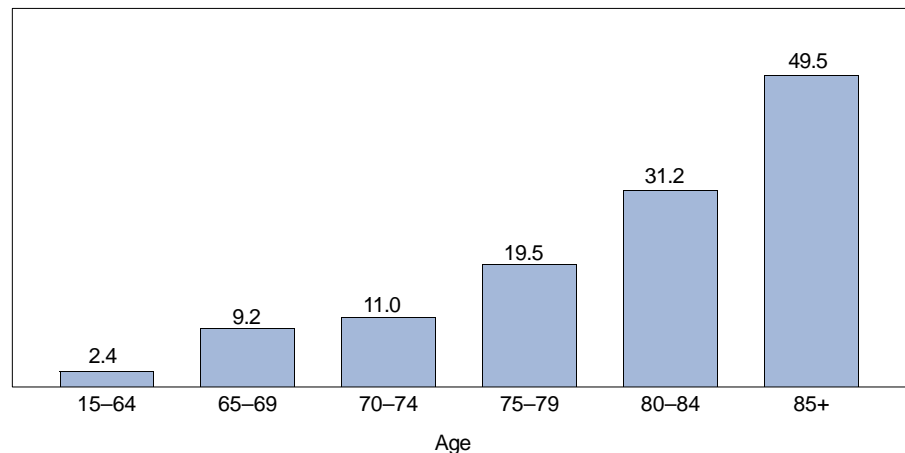
The 1990-91 data from the Survey of Income and Program Participation reveal a strong relationship between age and the need for assistance among the civilian noninstitutionalized population (i.e. persons in institutions, such as nursing homes, are not included in these data). Among persons aged 15 to 64, only 2 percent needed assistance. At older ages,

³⁴ John M. McNeil, U.S. Bureau of the Census, *Americans With Disabilities: 1991-92*, Current Population Reports, P70-33, Washington, DC, December 1993.

Figure 3-13.

Percent of Persons Needing Assistance With Everyday Activities by Age: 1991

(Civilian noninstitutional population)



Note: The universe for SIPP data is persons 15 years and older.

Source: U.S. Bureau of the Census, 1990 and 1991 panels of the Survey of Income and Program Participation (SIPP) files.

the proportion requiring assistance ranged from 9 percent of those aged 65 to 69 up to 50 percent for those aged 85 or older (figure 3-13). Within each age category, women were more likely to need assistance than men. For example, among noninstitutionalized persons aged 75 and older, 33 percent of women needed help compared with 23 percent of men (figure 3-14). Elderly Blacks and Hispanics were more likely than Whites to need assistance (figure 3-15).

Estimates of the Size of the Dependent Elderly Population Vary

We can get an idea about the size of the elderly population who are dependent. Wiener et al. found that across national surveys, 5 to 8 percent of the noninstitutional elderly received help in one or more of the following five ADL's: bathing, dressing, moving out of beds and chairs, toileting, and eating.³⁵ A broader definition of functionally dependent elderly includes those in nursing homes and the noninstitutionalized elderly with a more extensive list of both ADL's and IADL's.

Hing and Bloom³⁶ defined functional dependency as persons dependent in at least one of seven ADL's or seven IADL's. Under this definition, they estimated 6.7 million noninstitutionalized elderly with functional dependencies. In 1985, all 1.3 million elderly nursing home residents were functionally

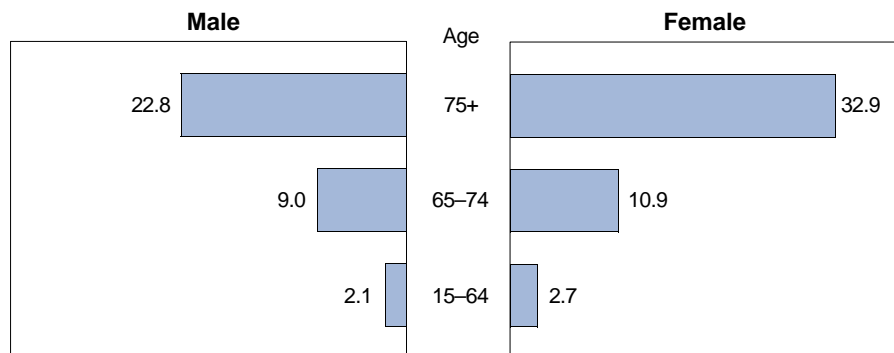
³⁵ Wiener et al., op.cit., table 1, and p. S235.

³⁶ E. Hing and B. Bloom, National Center for Health Statistics, *Long-Term Care for the Functionally Dependent Elderly, Vital and Health Statistics, Series 13, No. 104*, DHHS Pub. No. (PHS)90-1765, Hyattsville, MD: Public Health Service, 1990. ADL's include bathing, dressing, eating, getting in or out of beds and chairs, mobility, using the toilet, and continence. IADL's include preparing meals, shopping, managing money, using the telephone, doing light housework, and getting outside.

Figure 3-14.

Percent of Persons Needing Assistance With Everyday Activities by Age and Sex: 1991

(Civilian noninstitutional population)



Note: The universe for SIPP data is persons 15 years and older.

Source: U.S. Bureau of the Census, 1990 and 1991 panels of the Survey of Income and Program Participation (SIPP) files.

dependent in one or more ADL or IADL activities. Thus, roughly 8 million elderly (including institutionalized) were functionally dependent in the mid-1980's. If doing heavy housework had been excluded from their list of IADLs, the estimate of noninstitutionalized elderly who were functionally dependent would have been reduced to 5.5 million.

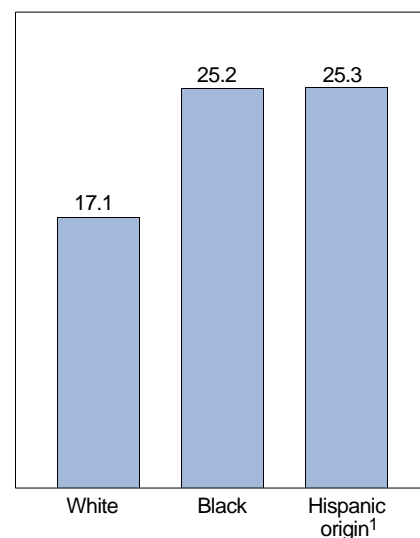
A recent Committee on National Statistics workshop noted that the lack of uniform measures used to operationalize functional disability across surveys clearly has produced a wide range in the estimates of the size of the population with disabilities. However, it is less clear whether these inconsistent definitions in the measurement of disability have led to contradictory estimates of disability trends.³⁷

³⁷ Committee on National Statistics, *Trends in Disability at Older Ages: Summary of a Workshop*, Vicki A. Freedman and Beth J. Soldo (eds.), 1994, National Academy Press.

Figure 3-15.

Percent of Persons 65 Years and Over Needing Assistance With Everyday Activities by Race and Hispanic Origin: 1991

(Civilian noninstitutional population)



¹ Hispanic origin may be of any race.

Note: The universe for SIPP data is persons 15 years and older.

Functional Limitations Are More Prevalent Among Women Than Men

Data from the 1991 Survey of Income and Program Participation (SIPP) show that elderly women are more likely than men to have difficulty because of a health or physical problem with most of the activities shown in table 3-8. These SIPP data also suggest that elderly persons living alone generally are more likely to have a functional limitation than those living with others. This may in part reflect the greater tendency for those living alone to be oldest old women.

Hing and Bloom used definitions of functional dependency unique to their report to come to the same conclusions about patterns. In their study, one-third (34 percent) of elderly women were functionally dependent compared with one-fifth (22 percent) of elderly men. They found that functionally dependent elderly males (61 percent) were more likely to live with a spouse than their female counterparts (24 percent). The gender differential in likelihood of living with a spouse increased with age, partly because married men tend to die before their wives. Functionally dependent

women aged 65 to 84 were most likely to live alone (38 percent). Among oldest old functionally dependent women, however, 30 percent lived with someone other than a spouse and 38 percent lived in a nursing home.³⁸

Elderly Blacks Have Higher Rates of Functional Limitations Than Elderly Whites

Regardless of race or sex, functional limitations increase with age, but at a different rate among groups. Data from the 1991 SIPP show the rate of functional limitation was higher among elderly Blacks than Whites. Among the population 65 years and over, 59 percent of Blacks had one or more functional limitations compared with 49 percent of Whites. The limitations were more likely to be severe among elderly Blacks as 40 percent had limitations that were severe compared with 27 percent of White elderly.³⁹

³⁸ E. Hing and B. Bloom, op. cit., pp. 6-7, table 5. Estimates are based on data collected in the Supplement on Aging to the 1984 National Health Interview Survey and the 1985 National Nursing Home Survey. See report for definitions of functional dependency.

³⁹ McNeil, op. cit., table 6.

Women Have More Years of Expected Dependency Than Men

Active life expectancy, a term coined by Katz et al.,⁴⁰ refers to the expected years of physical, emotional, and intellectual vigor or functional well being. This concept uses the loss of independence in the activities of daily living (ADLs) as the end of active life expectancy. In their 1974 study of noninstitutionalized elderly in Massachusetts, Katz et al. found that active life expectancy was about 10 years for those aged 65 to 70 years and then decreased to about 3 years for those 85 or older. Active life expectancy was shorter for the poor than for the nonpoor by 2.4 years for the 65-to-69 group and by less than 1 year for those 75 years and older. While men had a shorter life expectancy, surviving men had a greater percentage of remaining years of independent life than women in all age groups. Because of the longer life expectancy of women, the duration of dependency was longer for elderly women than for men.

⁴⁰ Sidney Katz et al., "Active Life Expectancy," *The New England Journal of Medicine*, November 17, 1983, pp. 1218-1224.

Table 3-8.
Functional Limitations of Persons 65 Years and Over by Age, Sex, and Type of Living Arrangement: 1991

(Civilian noninstitutional population. Numbers in thousands)

Functional limitation	Age								Living alone	Living with others
	Persons 65 years and over	65 to 74 years			75 to 84 years			85 years and over		
		Total	Male	Female	Total	Male	Female			
Total, 65 years and over	30,748	18,397	8,264	10,133	9,920	3,906	6,014	2,430	9,634	21,214
Percent with difficulty¹										
Walking	14.3	9.2	7.4	10.5	18.8	16.2	20.4	34.9	18.1	12.6
Getting outside	15.9	8.7	5.9	10.9	22.3	15.9	26.4	44.8	20.7	13.8
Bathing or showering	9.4	5.6	4.0	7.0	11.3	8.6	13.0	30.6	11.2	8.7
Transferring ²	9.0	5.9	4.8	6.9	11.6	9.3	13.1	21.9	10.8	8.2
Dressing	5.8	3.8	3.4	4.1	7.0	5.3	8.1	16.1	6.3	5.6
Using toilet	4.2	2.0	1.5	2.5	5.7	4.2	6.8	14.2	4.8	3.9
Eating	2.1	1.3	0.8	1.7	3.1	3.1	3.1	4.1	2.2	2.0
Preparing meals	8.6	4.5	4.0	4.9	11.7	8.7	13.6	27.6	9.1	8.4
Managing money	7.1	2.8	2.6	3.0	10.3	8.1	11.7	26.2	8.4	6.5
Using the telephone	7.1	3.8	5.2	2.7	9.7	12.3	8.0	21.4	7.1	7.1
Doing light housework	11.4	6.6	5.3	7.7	15.5	12.4	17.5	30.8	13.6	10.4
Percent of total receiving help³										
Walking	5.9	3.3	2.9	3.5	8.2	8.4	8.0	16.8	4.9	6.4
Getting outside	13.2	6.3	3.7	8.5	18.8	13.4	22.3	42.3	17.2	11.4
Bathing or showering	5.9	3.3	2.6	3.8	7.0	6.2	7.5	20.9	5.0	6.3
Transferring ²	3.9	2.5	2.2	2.7	4.8	3.9	5.4	11.0	2.7	4.5
Dressing	3.9	2.3	2.3	2.3	5.0	4.2	5.5	11.1	2.7	4.4
Using toilet	2.6	1.3	1.0	1.5	3.9	3.4	4.1	7.8	1.9	2.9
Eating	1.1	0.5	0.4	0.6	1.9	2.2	1.7	2.5	0.8	1.2
Preparing meals	7.5	3.6	3.7	3.5	10.5	8.5	11.7	25.4	7.0	7.8
Managing money	6.4	2.5	2.2	2.7	9.1	7.5	10.1	24.6	7.4	5.9
Doing light housework	8.9	4.8	3.9	5.6	12.1	9.3	14.0	27.3	9.6	8.7

¹Difficulty due to a physical or mental health condition.

²Getting in or out of a bed or chair.

³Receiving help due to a physical or mental health condition with the specified difficulty.

Source: U.S. Bureau of the Census, 1991 Survey of Income and Program Participation, Functional Limitations and Disability File, wave 3, unpublished tabulations.

Health Insurance Coverage

Nearly All Elderly Covered by Medicare

Health care coverage is available to nearly all elderly through Medicare. Longitudinal data for a 32-month period beginning in early 1990 from the SIPP indicated that 99.4 percent of the elderly had continuous health insurance coverage, which included private health insurance coverage, Medicare, military health care, and Medicaid. About three-fifths (63 percent) of the elderly were continuously covered by private health insurance during the 1990-92 period.⁴¹

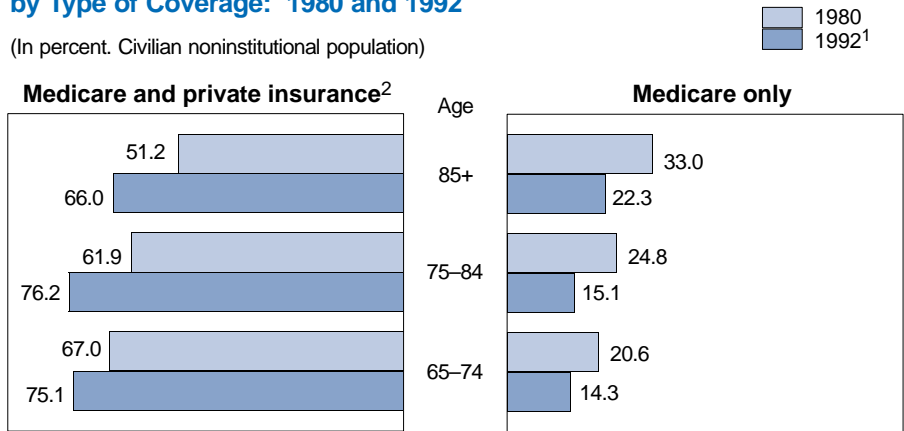
The National Center for Health Statistics reports that in addition to Medicare, private insurance covered three-fourths (75 percent) of persons aged 65 to 74 in 1992 and about two-thirds (66 percent) of persons aged 85 years and over, an increase from 1980. The oldest old are more likely than those aged 65 to 84 years to be covered by Medicare only (figure 3-16).

Both Medicare and private insurance were held by nearly four-fifths (79 percent) of elderly Whites as compared with less than two-fifths of elderly Blacks (39 percent) and elderly Hispanics (36 percent). Medicare was far more likely to be the sole source of insurance for both Black and Hispanic elderly (37 and 30 percent,

⁴¹ Robert L. Bennefield, U.S. Bureau of the Census, *Health Insurance, 1990 to 1992*, Current Population Reports, P70-37, Washington, DC, 1994, table D.

Figure 3-16.
Health Care Coverage for Persons 65 Years and Over by Type of Coverage: 1980 and 1992

(In percent. Civilian noninstitutional population)



¹ The questionnaire design changed in 1992 compared with 1980. The direction of health care coverage change is consistent with data from the Current Population Survey.

² Includes persons not covered by private insurance or Medicaid and a small proportion of persons with other types of coverage, such as CHAMPUS or public assistance.

Source: National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD, Public Health Service, 1994, table 145.

respectively) than for Whites (13 percent).⁴²

Using a broad definition of disability⁴³, 1991-92 SIPP data show that elderly persons not covered by private health insurance were more likely to have a disability and a severe disability than those covered by private insurance

⁴² National Center for Health Statistics, *Health, United States, 1993*, op.cit., table 145. Data are from the National Health Interview Survey. Data by race and Hispanic origin are age-adjusted.

⁴³ For the purpose of this study, a person was considered to have a disability if the person was identified by any of 12 categories of questions covering such areas as: the use of special aids, sensory and physical functional activities, six Activities of Daily Living (ADL's), five Instrumental Activities of Daily Living (IADL's), the existence of specific conditions, and the presence of a physical, mental, or other health condition that limited the kind or amount of work/housework the person can do.

(table 3-9). In part, this may result from more difficulty for the disabled elderly to obtain or qualify for private health insurance coverage.

Implications of Health Status for Long-Term Care

Multiple Impairments Lead to Institutionalization

The increasing size of the oldest old population, and their health situation, which clearly declines with increasing age, suggest that a larger number will seek long-term care as part of the continuum from independent living, to assisted living at home, to institutional care. Hing and Bloom found that the elderly with mild impairments were highly likely to live in the community.

Table 3-9.
**Private Health Insurance Coverage of Persons
 65 Years and Over: 1991-92**

(In thousands)

Type of functional limitation	Covered	Not covered
Total 65 years and over	23,893	6,796
With a functional limitation	11,964	4,577
Percent	50.1	67.4
With a severe functional limitation	7,050	3,368
Percent	29.5	49.6

Source: U.S. Bureau of the Census, *Americans With Disabilities: 1991-92*, Current Population Reports, Household Economic Studies, P70-33, U.S. Government Printing Office, Washington, DC, December 1993, table 13.

Elderly with three or more impairments were still likely to live in the community but were much more likely than the mildly impaired to live in a nursing home. Three in five elderly with five or more impairments lived in nursing homes and rarely lived alone (5 percent).⁴⁴

The number of elderly requiring services for functional disabilities can be expected to increase unless there are medical revolutions on several fronts. It is not clear whether the percentage of the oldest old population requiring care will increase. Much turns on whether medical technology can increase active life expectancy among the oldest old as well as increase the length of life. The availability of care that is intermediate between complete

⁴⁴ The literature on the link between functional dependency and the increased use of long-term care services is reviewed in Hing and Bloom, *op.cit.*, p. 1. Also see table B (p. 8) for the distribution of functionally dependent persons by living arrangements.

⁴⁵ Kenneth G. Manton, Larry Corder, and Eric Stallard, "Changes in the Use of Personal Assistance and Special Equipment from the 1982 and 1989 NLTCs," *The Gerontologist*, Vol. 33, No. 2, pp. 168-176.

independence in the home and the dependence of a nursing home also appears to be a factor. Recent research found that reliance of elderly community residents on the use of equipment to assist in activities of daily living increased between 1982 and 1989, yet at higher impairment levels, the use of equipment only (without personal assistance) seemed insufficient to support individuals in the community.⁴⁵ In 1960, 39 percent of nursing home residents were aged 75 to 84 and only 21 percent were 85 or older. In 1990, the proportion 75 to 84 had declined to 34 percent, while the proportion of nursing home residents who were aged 85 and over had doubled to 42 percent.⁴⁶ That comes from both a decreased probability of dependency among the younger old and increased opportunities

⁴⁶ U.S. Bureau of the Census, U.S. Census of Population: 1960, Subject Reports, *Inmates of Institutions, Final Report*, PC(2)-8A, Washington, DC, 1963, table 7; and *Nursing Home Population: 1990*, CPH-L-137, Washington, DC, 1993, table 2.

for help in the home that delay movement into a nursing home.

Health-Care Expenditures

An Increased Proportion of Public Health-Care Dollars Go to the Elderly

Nearly 3 of 5 (58 percent) public health-care dollars were spent in 1987 for the elderly, up from one-half (51 percent) in 1977, according to the Health Care Financing Administration (HCFA). (Comparable health care expenditure data by age after 1987 are not available.) In both 1987 and 1977, per capita public expenditures for personal health care were about 17 times greater for the elderly than for children and youth under 19 (table 3-10). During this 10-year period, per capita public expenditures on personal health care for the elderly increased 49 percent (using constant 1987 dollars).

Personal health-care expenditures ranged in 1987 from \$3,700 for persons 65 to 69 years old to nearly \$9,200 for persons 85 years and older. Public funds pay about three-fifths of the bill for both age groups (table 3-11). Hospitalization accounts for most of the bill. The services of physicians are the next most costly component for the elderly except for persons 80 years and over. For them, the cost of nursing homes takes second place.

HCFA reports that \$60 billion were spent on nursing home care in 1991. Half of that came from the government (mostly Medicaid) and most of the other half from the out-of-pocket expenses of individuals. Private

health insurance paid for one percent of nursing home costs. From the latest National Nursing Home Survey data, average monthly charges in 1985 were nearly \$1,500 and these costs varied considerably by type of nursing home. Skilled nursing facilities cost the most, about \$1,900 per month. Facilities that were not certified cost under \$900 per month.⁴⁷

In 1991, annual Medicare payments per person served ranged from

⁴⁷ National Center for Health Statistics, *Health, United States, 1993*, Hyattsville, MD: Public Health Service, 1994, table 134, p. 230, and table 138, p. 234.

\$2,700 for persons aged 65 to 66 to \$4,900 for persons 85 years or older. Average payments per person in 1991 for elderly Whites were \$3,800 compared with \$4,600 for persons of other races. Fewer elderly men than women were enrolled in Medicare (12.6 million and 18.8 million, respectively) and fewer men than women were served (the number served per 1,000 enrollees was 759 for men and 828 for women). When men 65 or older used Medicare, the payments per person served averaged higher (\$4,400) than for elderly women

(\$3,600). The gender difference in Medicare payments per elderly enrollee was less (\$3,300 for men and \$3,000 for women).⁴⁸

The elderly represented only about 12 percent of Medicaid recipients (3.7 million elderly) in 1992 but received nearly one-third of the total Medicaid budget. The medical vendor payments for the elderly were \$29.1 billion, about \$7,800 per recipient.⁴⁹

⁴⁸ Ibid., table 148, p. 244.

⁴⁹ Ibid., table 150, p. 247.

Table 3-10.
Personal Health-Care Expenditures, by Age: 1977 and 1987

Type of expenditure and age	Aggregate amount (in billions)			Per capita amount		
	1977 ¹	1987	Percent change	1977 ¹	1987	Percent change
Total expenditures						
All ages	\$281.9	\$447.0	58.6	\$1,234.1	\$1,776.0	43.9
Under 19 years	\$36.6	\$51.9	41.8	\$504.5	\$745.0	47.7
19 to 64 years	\$160.5	\$233.1	45.2	\$1,220.9	\$1,535.0	25.7
65 years and over	\$84.8	\$162.0	91.0	\$3,480.9	\$5,360.0	54.0
Private expenditures						
All ages	\$173.7	\$271.8	56.5	\$759.6	\$1,079.0	42.0
Under 19 years	\$27.0	\$38.1	41.1	\$371.3	\$547.0	47.3
19 to 64 years	\$116.8	\$173.0	48.1	\$889.0	\$1,139.0	28.1
65 years and over	\$29.8	\$60.6	103.4	\$1,224.7	\$2,004.0	63.6
Public expenditures						
All ages	\$108.4	\$175.3	61.7	\$474.5	\$696.0	46.7
Under 19 years	\$9.8	\$13.8	40.8	\$133.2	\$198.0	48.6
19 to 64 years	\$43.5	\$60.0	37.9	\$332.0	\$395.0	19.0
65 years and over	\$55.0	\$101.5	84.5	\$2,258.1	\$3,356.0	48.6

¹ 1977 in 1987 constant dollars.

Source: Health Care Financing Administration, Office of the Actuary, data from the Office of National Cost Estimates.

Table 3-11.
Per Capita Personal Health-Care Expenditures for Persons 65 Years and Over by Age: 1987
(In dollars)

Age and type of care	Total	Private	Public
65 years and over			
Total	5,360	2,004	3,356
Hospital care	2,248	333	1,915
Physician's services	1,107	393	714
Nursing home care	1,085	634	451
Other personal care	920	644	276
65 to 69 years			
Total	3,728	1,430	2,298
Hospital care	1,682	312	1,370
Physician's services	974	380	594
Nursing home care	165	94	71
Other personal care	907	644	263
70 to 74 years			
Total	4,424	1,564	2,860
Hospital care	2,062	327	1,735
Physician's services	1,086	389	697
Nursing home care	360	205	155
Other personal care	916	644	262
75 to 79 years			
Total	5,455	1,843	3,612
Hospital care	2,536	341	2,195
Physician's services	1,191	398	793
Nursing home care	802	461	341
Other personal care	925	644	281
80 to 84 years			
Total	6,717	2,333	4,384
Hospital care	2,935	355	2,580
Physician's services	1,246	407	839
Nursing home care	1,603	927	676
Other personal care	934	644	290
85 years and over			
Total	9,178	3,631	5,547
Hospital care	3,231	376	2,855
Physician's services	1,262	420	842
Nursing home care	3,738	2,191	1,547
Other personal care	947	645	302

Source: Health Care Financing Administration, Office of the Actuary, data from the Office of National Cost Estimates.