

United States Life Tables, 2007

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Abstract

Objectives—This report presents complete period life tables by race, Hispanic origin, and sex for the United States based on age-specific death rates in 2007.

Methods—Data used to prepare the 2007 life tables are 2007 final mortality statistics, July 1, 2007, population estimates based on the 2000 decennial census, and 2007 Medicare data for ages 66–100. The methods used to estimate the life tables for the total, white, and black populations were first used in annual life tables in 2005 and have been in use since that time (1). The methods used to estimate the life tables for the Hispanic, non-Hispanic white, and non-Hispanic black populations were first used to estimate U.S. life tables by Hispanic origin for data year 2006 (2).

Results—In 2007, the overall expectation of life at birth was 77.9 years, representing an increase of 0.2 years from life expectancy in 2006. From 2006 to 2007, life expectancy at birth increased for all groups considered. It increased for males (from 75.1 to 75.4) and females (from 80.2 to 80.4), the white (from 78.2 to 78.4) and black (from 73.2 to 73.6) populations, the Hispanic population (from 80.6 to 80.9), the non-Hispanic white population (from 78.1 to 78.2), and the non-Hispanic black population (from 72.9 to 73.2).

Keywords: life expectancy • survival • death rates • race

Introduction

There are two types of life tables—the cohort (or generation) and the period (or current). The cohort life table presents the mortality experience of a particular birth cohort—all persons born in the year 1900, for example—from the moment of birth through consecutive ages in successive calendar years. Based on age-specific death rates observed through consecutive calendar years, the cohort life table reflects the mortality experience of an actual cohort from birth until no lives remain in the group. To prepare a single complete cohort life table requires data over many years. It is usually not feasible to construct cohort life tables entirely on the basis of observed data for real cohorts due to data unavailability or incom-

pleteness (3). For example, a life table representation of the mortality experience of a cohort of persons born in 1970 would require the use of data projection techniques to estimate deaths into the future (4,5).

Unlike the cohort life table, the period life table does not represent the mortality experience of an actual birth cohort. Rather, the period life table presents what would happen to a hypothetical cohort if it experienced throughout its entire life the mortality conditions of a particular time period. Thus, for example, a period life table for 2007 assumes a hypothetical cohort subject throughout its lifetime to the age-specific death rates prevailing for the actual population in 2007. The period life table may thus be characterized as rendering a “snapshot” of current mortality experience, and shows the long-range implications of a set of age-specific death rates that prevailed in a given year. In this report the term “life table” refers only to the period life table and not to the cohort life table.

This report presents period life tables by race, Hispanic origin, race for the non-Hispanic population, and sex. Historically, the U.S. life table program had been limited to the inclusion of life tables for the white and black populations. As a result of data limitations, life tables for other racial and ethnic populations had not been produced. Recent research into these data limitations identified and quantified them and led to the development of methodological strategies to overcome their effect and allow for the production of life tables for the Hispanic population (2,6,7). The first U.S. life tables by Hispanic origin were published in “United States Life Tables by Hispanic Origin” for data year 2006 (2). The methodology developed and described in that report is used in this report to produce U.S. life tables for the Hispanic, non-Hispanic white, and non-Hispanic black populations (see “[Technical Notes](#)” for detailed discussion of the methodology).

Data and Methods

The data used to prepare the U.S. life tables for 2007 are final numbers of deaths for the year 2007, postcensal population estimates for the year 2007, and age-specific death and population counts for Medicare beneficiaries aged 66–100 for the year 2007 from the Centers for Medicare & Medicaid Services. Data from the



Medicare program are used to supplement vital statistics and census data for ages 66 and over (see “[Technical Notes](#)” for a detailed description of the datasets used).

Life tables can be classified in two ways according to the length of the age interval in which data are presented. A complete life table contains data for every year of age. An abridged life table typically contains data by 5- or 10-year age intervals. A complete life table, of course, can be easily aggregated into 5- or 10-year age groups (see “[Technical Notes](#)” for instructions on how to do this). Other than the decennial life tables, U.S. life tables based on data prior to 1997 are abridged life tables constructed by reference to a standard table (8). The 2007 U.S. life tables are complete life tables. See “[Technical Notes](#)” for more information on the method used to construct the life tables in this report.

Expectation of life—The most frequently used life table statistic is life expectancy (e_x), which is the average number of years of life remaining for persons who have attained a given age (x). Life expectancy and other life table values for each age in 2007 are shown for the total population, by race, Hispanic origin, and sex in [Tables 1–18](#). Life expectancy is summarized by age, race, Hispanic origin, and sex in [Tables A and B](#).

Life expectancy at birth (e_0) for 2007 for the total population was 77.9 years. This represents the average number of years that the members of the hypothetical life table cohort may expect to live at the time of birth ([Table A](#)).

Survivors to specified ages—Another way of assessing the longevity of the period life table cohort is by determining the proportion who survive to specified ages. The l_x column of the life table provides the data for computing the proportion. [Tables B and C](#) summarize the number of survivors by age, race, Hispanic origin, and sex. To illustrate, 54,918 persons out of the original 2007 synthetic life table cohort of 100,000 (or 54.9 percent) were alive at exact age 80. In other words, the probability that a person will survive from birth to age 80, given 2007

age-specific mortality, is 54.9 percent. Probabilities of survival can be calculated at any age by simply dividing the number of survivors at the terminal age by the number at the beginning age. For example, to calculate the probability of surviving from age 20 to age 85, one would divide the number of survivors at age 85 (38,565) by the number of survivors at age 20 (98,754), which results in a 39.1 percent probability of survival.

Explanation of the columns of the life table

Column 1—Age (x to $x + 1$)—Shows the age interval between the two exact ages indicated. For instance, “20–21” means the 1-year interval between the 20th and 21st birthdays.

Column 2—Probability of dying (q_x)—Shows the probability of dying between ages x to $x + 1$. For example, for males in the age interval 20–21 years, the probability of dying is 0.001292 ([Table 2](#)). The “probability of dying” column forms the basis of the life table; all subsequent columns are derived from it.

Column 3—Number surviving (l_x)—Shows the number of persons from the original hypothetical cohort of 100,000 live births, who survive to the beginning of each age interval. The l_x values are computed from the q_x values, which are successively applied to the remainder of the original 100,000 persons still alive at the beginning of each age interval. Thus, out of 100,000 female babies born alive, 99,390 will complete the first year of life and enter the second; 99,227 will reach age 10; 98,982 will reach age 20; and 45,436 will live to age 85 ([Table 3](#)).

Column 4—Number dying (d_x)—Shows the number dying in each successive age interval out of the original 100,000 live births. For example, out of 100,000 males born alive, 739 will die in the first year of life; 127 between ages 20 and 21; and 946 will die after reaching age 100 ([Table 2](#)). Each figure in column 4 is the difference between two successive figures in column 3.

Column 5—Person-years lived (L_x)—Shows the number of person-years lived by the hypothetical life table cohort within an age

Table A. Expectation of life by age, race, and sex: United States, 2007

Age	All races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0	77.9	75.4	80.4	78.4	75.9	80.8	73.6	70.0	76.8
1	77.5	74.9	79.9	77.8	75.4	80.2	73.6	70.1	76.8
5	73.6	71.0	76.0	73.9	71.4	76.3	69.7	66.2	72.9
10	68.6	66.1	71.0	68.9	66.5	71.3	64.7	61.2	67.9
15	63.7	61.1	66.1	64.0	61.6	66.3	59.8	56.3	63.0
20	58.8	56.4	61.2	59.2	56.8	61.5	55.0	51.7	58.1
25	54.1	51.8	56.3	54.4	52.2	56.6	50.4	47.2	53.3
30	49.4	47.1	51.5	49.7	47.5	51.7	45.8	42.7	48.5
35	44.6	42.5	46.7	44.9	42.8	46.9	41.2	38.2	43.8
40	39.9	37.8	41.9	40.2	38.1	42.1	36.7	33.8	39.1
45	35.4	33.3	37.2	35.6	33.6	37.4	32.3	29.5	34.6
50	30.9	29.0	32.7	31.1	29.2	32.8	28.1	25.4	30.4
55	26.7	24.9	28.2	26.8	25.1	28.4	24.2	21.7	26.3
60	22.5	20.9	23.9	22.6	21.0	24.0	20.6	18.3	22.4
65	18.6	17.2	19.9	18.7	17.3	19.9	17.2	15.2	18.7
70	15.0	13.7	16.0	15.0	13.8	16.0	14.0	12.4	15.2
75	11.7	10.6	12.5	11.7	10.6	12.4	11.2	9.9	12.1
80	8.8	7.9	9.4	8.8	7.9	9.3	8.7	7.7	9.4
85	6.5	5.8	6.8	6.4	5.7	6.8	6.7	6.0	7.1
90	4.6	4.1	4.8	4.6	4.1	4.8	5.1	4.6	5.3
95	3.2	2.9	3.3	3.2	2.9	3.3	3.8	3.5	3.9
100	2.3	2.1	2.3	2.2	2.0	2.2	2.8	2.6	2.8

Table B. Expectation of life by age, sex, Hispanic origin, and race for non-Hispanic population: United States, 2007

Age	All origins			Hispanic			Non-Hispanic white			Non-Hispanic black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0	77.9	75.4	80.4	80.9	78.2	83.4	78.2	75.8	80.6	73.2	69.6	76.5
1	77.5	74.9	79.9	80.4	77.7	82.8	77.7	75.3	80.0	73.2	69.7	76.5
5	73.6	71.0	76.0	76.4	73.8	78.9	73.8	71.4	76.1	69.3	65.8	72.6
10	68.6	66.1	71.0	71.5	68.8	73.9	68.8	66.4	71.1	64.4	60.9	67.7
15	63.7	61.1	66.1	66.5	63.9	69.0	63.9	61.5	66.2	59.5	55.9	62.7
20	58.8	56.4	61.2	61.7	59.2	64.0	59.0	56.7	61.3	54.7	51.3	57.8
25	54.1	51.8	56.3	57.0	54.6	59.2	54.3	52.1	56.4	50.1	46.8	53.0
30	49.4	47.1	51.5	52.2	49.9	54.3	49.5	47.4	51.6	45.5	42.4	48.2
35	44.6	42.5	46.7	47.4	45.1	49.4	44.8	42.7	46.8	40.9	37.9	43.5
40	39.9	37.8	41.9	42.7	40.4	44.6	40.1	38.1	42.0	36.4	33.5	38.9
45	35.4	33.3	37.2	38.0	35.9	39.8	35.5	33.5	37.3	32.0	29.2	34.4
50	30.9	29.0	32.7	33.5	31.4	35.1	31.0	29.2	32.7	27.9	25.2	30.2
55	26.7	24.9	28.2	29.1	27.2	30.6	26.7	25.0	28.3	24.0	21.5	26.1
60	22.5	20.9	23.9	24.8	23.1	26.2	22.6	21.0	24.0	20.4	18.2	22.2
65	18.6	17.2	19.9	20.8	19.2	21.9	18.7	17.2	19.8	17.1	15.1	18.5
70	15.0	13.7	16.0	17.0	15.6	17.9	15.0	13.7	16.0	14.0	12.3	15.1
75	11.7	10.6	12.5	13.5	12.3	14.1	11.6	10.6	12.4	11.1	9.8	12.0
80	8.8	7.9	9.4	10.4	9.4	10.8	8.8	7.9	9.3	8.7	7.7	9.3
85	6.5	5.8	6.8	7.7	7.0	8.0	6.4	5.7	6.8	6.7	6.0	7.1
90	4.6	4.1	4.8	5.6	5.1	5.7	4.5	4.1	4.8	5.1	4.6	5.3
95	3.2	2.9	3.3	4.0	3.6	4.0	3.2	2.9	3.3	3.8	3.5	3.9
100	2.3	2.1	2.3	2.8	2.6	2.7	2.2	2.0	2.2	2.8	2.6	2.8

interval x to $x + 1$. Each figure in column 5 represents the total time (in years) lived between two indicated birthdays by all those reaching the earlier birthday. Thus, the figure 98,474 for males in the age interval 20–21 is the total number of years lived between the 20th and 21st birthdays by the 98,537 (column 3) males who reached their 20th birthday out of 100,000 males born alive (Table 2).

Column 6—Total number of person-years lived (T_x)—Shows the total number of person-years that would be lived after the beginning of the age interval x to $x + 1$ by the synthetic life table cohort. For

example, the figure 5,557,249 is the total number of years lived after attaining age 20 by the 98,537 males reaching that age (Table 2).

Column 7—Expectation of life (e_x)—Shows, at any given age, the average number of years remaining to be lived by those surviving to that age on the basis of a given set of age-specific rates of dying. It is derived by dividing the total person-years that would be lived above age x by the number of persons who survived to that age interval (T_x/l_x). Thus, the average remaining lifetime for males who reach age 20 is 56.4 years (5,557,249 divided by 98,537) (Table 2).

Table C. Number of survivors by age, out of 100,000 born alive, by race, sex, and age: United States, 2007

Age	All races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,324	99,261	99,390	99,436	99,382	99,492	98,674	98,549	98,803
5	99,211	99,137	99,288	99,333	99,270	99,400	98,508	98,371	98,650
10	99,143	99,063	99,227	99,269	99,200	99,341	98,419	98,271	98,573
15	99,060	98,966	99,159	99,192	99,111	99,277	98,304	98,132	98,483
20	98,754	98,537	98,982	98,902	98,716	99,099	97,895	97,505	98,299
25	98,269	97,824	98,742	98,443	98,046	98,868	97,221	96,473	97,996
30	97,782	97,141	98,463	97,986	97,408	98,607	96,467	95,383	97,572
35	97,242	96,423	98,108	97,481	96,738	98,278	95,580	94,166	96,990
40	96,537	95,535	97,592	96,822	95,905	97,804	94,422	92,701	96,116
45	95,475	94,223	96,784	95,823	94,663	97,058	92,768	90,671	94,803
50	93,864	92,246	95,542	94,308	92,785	95,914	90,247	87,635	92,750
55	91,497	89,299	93,753	92,088	90,012	94,257	86,422	82,879	89,763
60	88,216	85,253	91,234	88,982	86,188	91,881	81,288	76,405	85,832
65	83,587	79,726	87,494	84,505	80,852	88,266	74,590	68,181	80,494
70	77,085	72,132	82,030	78,111	73,390	82,904	66,212	58,290	73,404
75	67,910	61,685	73,973	68,972	62,991	74,898	55,796	46,619	64,002
80	54,918	47,627	61,848	55,893	48,785	62,732	43,044	33,507	51,565
85	38,565	31,177	45,436	39,258	31,945	46,098	29,174	20,744	36,809
90	21,526	15,684	26,842	21,806	15,960	27,122	16,345	10,388	21,831
95	8,340	5,238	11,078	8,316	5,214	11,037	6,950	3,865	9,793
100	1,844	946	2,587	1,773	896	2,492	1,998	957	2,912

Results

Life expectancy in the United States

Tables 1–18 show complete life tables by race (white and black), Hispanic origin, race for the non-Hispanic population, and sex for 2007. Tables A and B summarize life expectancy by age, race, Hispanic origin, and sex. Life expectancy at birth for 2007 represents the average number of years that a group of infants would live if the infants were to experience throughout life the age-specific death rates prevailing in 2007. In 2007, life expectancy at birth was 77.9 years, increasing by 0.2 years from 77.7 years in 2006.

Changes in mortality levels by age and cause of death have an important effect on changes in life expectancy. Life expectancy at birth increased by 0.2 years from 2006 to 2007 because of decreases in mortality from heart disease, cancer, influenza and pneumonia, and stroke and diabetes. Decreases in mortality from these same causes of death also generated increases in life expectancy among the male and female populations, when analyzed separately. The increase in life expectancy in 2007 from 2006 for the population as a whole could have been greater than 0.2 years were it not for the increases in mortality from chronic liver disease and cirrhosis and suicide (9).

The difference in life expectancy between the sexes was 5.0 years in 2007, declining from 5.1 years in 2006. From 1900 to 1975, the difference in life expectancy between the sexes increased from 2.0 years to 7.8 years. The increasing gap during these years is attributed to increases in male mortality due to ischemic heart disease and lung cancer, both of which increased largely as the result of men's early and widespread adoption of cigarette smoking (10,11). Between 1979 and 2005, the difference in life expectancy between the sexes narrowed from 7.8 years to 5.0 years, increasing slightly to 5.1 in 2006, and declining again to 5.0 years in 2007. The general decline in the difference between males and females since 1979 reflects proportionately greater increases in lung cancer mortality for women than for men and proportionately larger decreases in heart disease mortality among men (10,11).

The 2007 life table may be used to compare life expectancy at any age from birth onward. On the basis of mortality experienced in 2007, a person aged 65 could expect to live an average of 18.6 more years for a total of 83.6 years, a person aged 85 could expect to live an additional 6.5 more years for a total of 91.5 years, and a person aged 100 could expect to live an additional 2.3 years on average (Table A).

Life expectancy by race

From 2006 to 2007, life expectancy increased by 0.4 years to 73.6 years for the black population, and by 0.2 years to 78.4 years for the white population (Table A). The difference in life expectancy between the white and black populations was 4.8 years in 2007, a historically record-low level. The white-black difference in life expectancy narrowed from 14.6 years in 1900 to 5.7 years in 1982, but increased to 7.1 years in 1993 before beginning to decline again in 1994 (7.0 years). The increase in the gap from 1983 to 1993 was largely the result of increases in mortality among the black male population due to HIV infection and homicide (10,11).

Among the four race-sex groups (Figure 1), white females continued to have the highest life expectancy at birth (80.8 years), followed

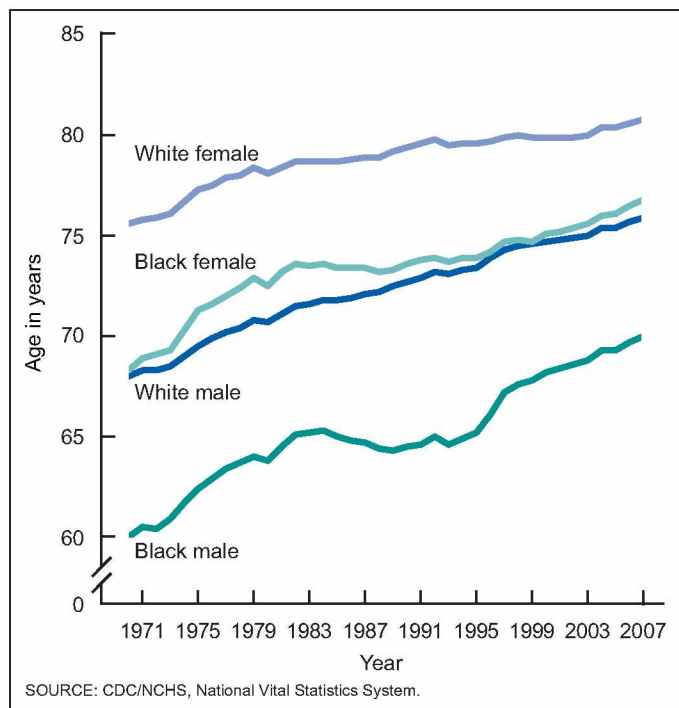


Figure 1. Life expectancy at birth, by race and sex: United States, 1970–2007

by black females (76.8 years), white males (75.9 years), and black males (70.0 years). From 2006 to 2007, life expectancy increased by 0.3 years for black females (from 76.5 to 76.8) as well as for black males (from 69.7 to 70.0). Black males experienced a decline in life expectancy every year for the period 1984–1989 (11), followed by annual increases in 1990–1992, 1994–2004, and 2005–2007. From 2006 to 2007, life expectancy increased by 0.2 years for white males (from 75.7 to 75.9) as well as for white females (from 80.6 to 80.8). Overall, gains in life expectancy between 1980 and 2007 were 6.2 years for black males, 5.4 years for white males, 4.3 years for black females, and 2.7 years for white females (Table 21).

Life expectancy by Hispanic origin

From 2006 to 2007, life expectancy increased by 0.3 years for the Hispanic population (from 80.6 to 80.9) and the non-Hispanic black population (from 72.9 to 73.2), and by 0.1 years for the non-Hispanic white population (from 78.1 to 78.2) (Table B). In 2007, the Hispanic population had a life expectancy advantage at birth of 2.7 years over the non-Hispanic white population, increasing from 2.5 years in 2006. The Hispanic population life expectancy advantage at birth of 7.7 years over the non-Hispanic black population in 2007 did not change from 2006. Among the six Hispanic origin-race-sex groups (Figure 2), Hispanic females continued to have the highest life expectancy at birth (83.4 years), followed by non-Hispanic white females (80.6 years), Hispanic males (78.2 years), non-Hispanic black females (76.5 years), non-Hispanic white males (75.8 years), and non-Hispanic black males (69.6 years). The smallest difference was between Hispanic and non-Hispanic white females, with Hispanic females having an advantage of 2.8 years (increasing from 2.7 in 2006). The largest difference was between Hispanic females and non-Hispanic black males, with Hispanic females having a life expectancy at birth 13.8 years greater. This advantage declined by 0.1 years from 2006.

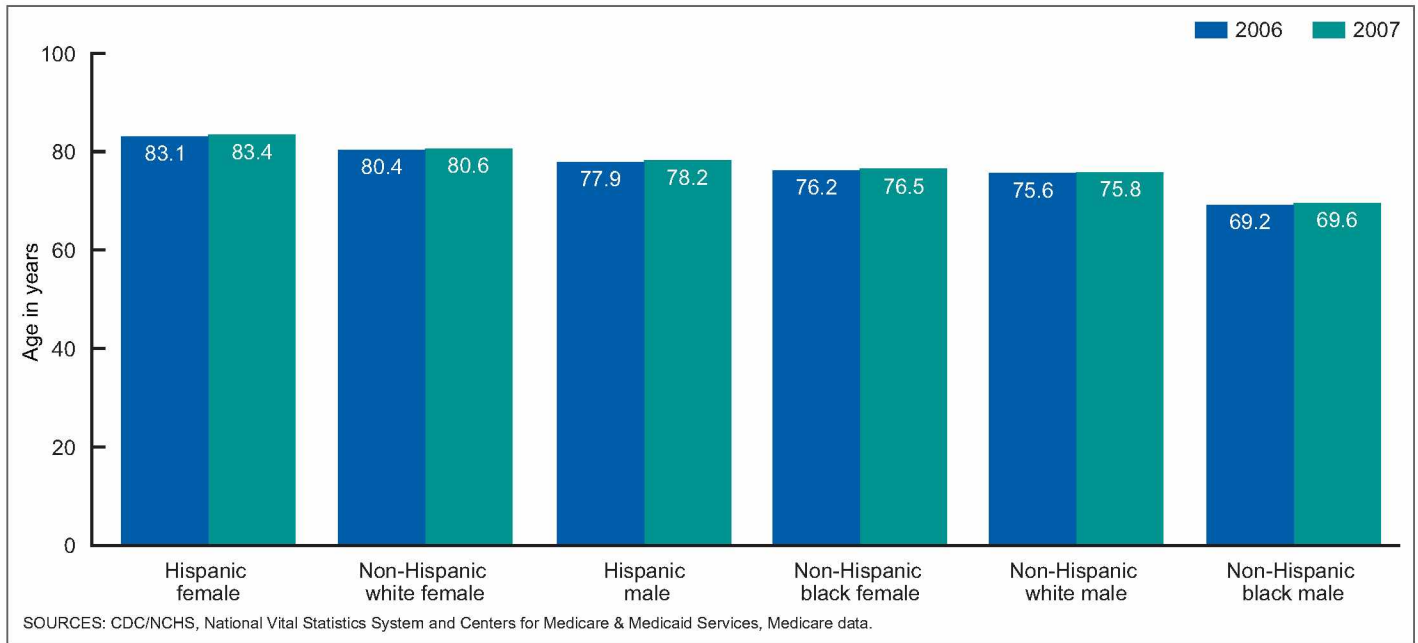


Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006 and 2007

The Hispanic mortality advantage is also evident in the effect produced on life expectancy at birth when race and Hispanic origin are separated. Until 2006, U.S. life tables were produced by race (white and black), irrespective of Hispanic origin. When the Hispanic population is excluded from the two race groups and only the non-Hispanic black and non-Hispanic white populations are included, life expectancy at birth declines. For example, for the black population, irrespective of Hispanic origin, life expectancy at birth was 73.6 years in 2007 but declined to 73.2 years when only the non-Hispanic segment of the black population was included. Similarly, life expectancy for the white population, irrespective of Hispanic origin, was 78.4 years in 2007, but

declined to 78.2 years when only the non-Hispanic segment of the white population was included. The effect of the Hispanic mortality advantage on race-specific life expectancy is also observed for each race-sex group.

Survivorship in the United States

Tables C and D summarize the number of survivors out of 100,000 persons born alive (l_x) by age, race, Hispanic origin, and sex. Table 19 shows trends in survivorship from 1900 through 2007. In 2007, 99.3 percent of all infants born in the United States survived

Table D. Number of survivors by age, out of 100,000 born alive, by Hispanic origin, sex, and race for non-Hispanic population: United States, 2007

Age	All origins			Hispanic			Non-Hispanic white			Non-Hispanic black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,324	99,261	99,390	99,448	99,403	99,494	99,437	99,381	99,497	98,666	98,550	98,786
5	99,211	99,137	99,288	99,345	99,293	99,400	99,336	99,270	99,406	98,490	98,363	98,629
10	99,143	99,063	99,227	99,279	99,221	99,340	99,274	99,203	99,348	98,397	98,259	98,551
15	99,060	98,966	99,159	99,204	99,135	99,277	99,197	99,115	99,284	98,275	98,114	98,457
20	98,754	98,537	98,982	98,927	98,714	99,151	98,910	98,732	99,097	97,854	97,472	98,266
25	98,269	97,824	98,742	98,473	98,027	98,967	98,459	98,079	98,860	97,160	96,407	97,954
30	97,782	97,141	98,463	98,075	97,456	98,783	97,988	97,424	98,580	96,372	95,269	97,510
35	97,242	96,423	98,108	97,672	96,898	98,569	97,455	96,722	98,218	95,442	93,996	96,897
40	96,537	95,535	97,592	97,126	96,188	98,213	96,772	95,861	97,717	94,232	92,463	95,982
45	95,475	94,223	96,784	96,317	95,128	97,689	95,742	94,593	96,931	92,513	90,351	94,621
50	93,864	92,246	95,542	95,077	93,568	96,797	94,197	92,687	95,752	89,923	87,204	92,534
55	91,497	89,299	93,753	93,192	91,201	95,407	91,955	89,897	94,067	86,006	82,280	89,514
60	88,216	85,253	91,234	90,626	87,968	93,501	88,828	86,061	91,662	80,716	75,597	85,474
65	83,587	79,726	87,494	86,946	83,372	90,683	84,321	80,716	88,001	73,841	67,161	79,999
70	77,085	72,132	82,030	81,431	76,673	86,246	77,870	73,204	82,582	65,363	57,245	72,759
75	67,910	61,685	73,973	73,802	67,840	79,642	68,673	62,745	74,527	54,906	45,631	63,244
80	54,918	47,627	61,848	62,950	55,945	69,571	55,568	48,513	62,337	42,212	32,671	50,787
85	38,565	31,177	45,436	48,160	40,550	54,913	38,958	31,701	45,731	28,503	20,142	36,122
90	21,526	15,684	26,842	30,990	24,097	36,551	21,596	15,801	26,858	15,914	10,046	21,351
95	8,340	5,238	11,078	15,127	10,506	18,304	8,223	5,151	10,916	6,752	3,727	9,560
100	1,844	946	2,587	4,801	2,859	5,777	1,753	884	2,467	1,942	922	2,848

the first year of life. In contrast, only 87.6 percent of infants born in 1900 survived the first year. Fifty-five percent of the 2007 period life table cohort survived to age 80 and about 1.8 percent survived to age 100. In 1900, the median age at death was 58 and only 0.03 percent survived to age 100.

Survivorship by race

Among the four race-sex groups (Table C), white females had the highest median age at death with about 49.7 percent surviving to age 84. Of the original hypothetical cohort of 100,000 infant white females, 99.1 percent survived to age 20, 88.3 percent survived to age 65, and 46.1 percent survived to age 85. White males had slightly higher survival rates than black females at the younger ages with 98.7 percent surviving to age 20 and 80.9 percent surviving to age 65 compared with 98.3 percent and 80.5 percent, respectively, for black females. At the older ages, however, black female survival surpassed white male survival. At age 85, white male survival was 31.9 percent compared with 36.8 percent for black females. This crossover occurs at age 70. The median age at death for black males was 73, which is 11 years less than that of white females. For black males, 97.5 percent survived to age 20, 68.2 percent to age 65, and 20.7 percent to age 85. By age 100, there was very little difference between the white and black populations in terms of survival. Less than 1 percent of white males and black males and slightly over 2 percent of white females and black females survived to age 100.

Survivorship by Hispanic origin

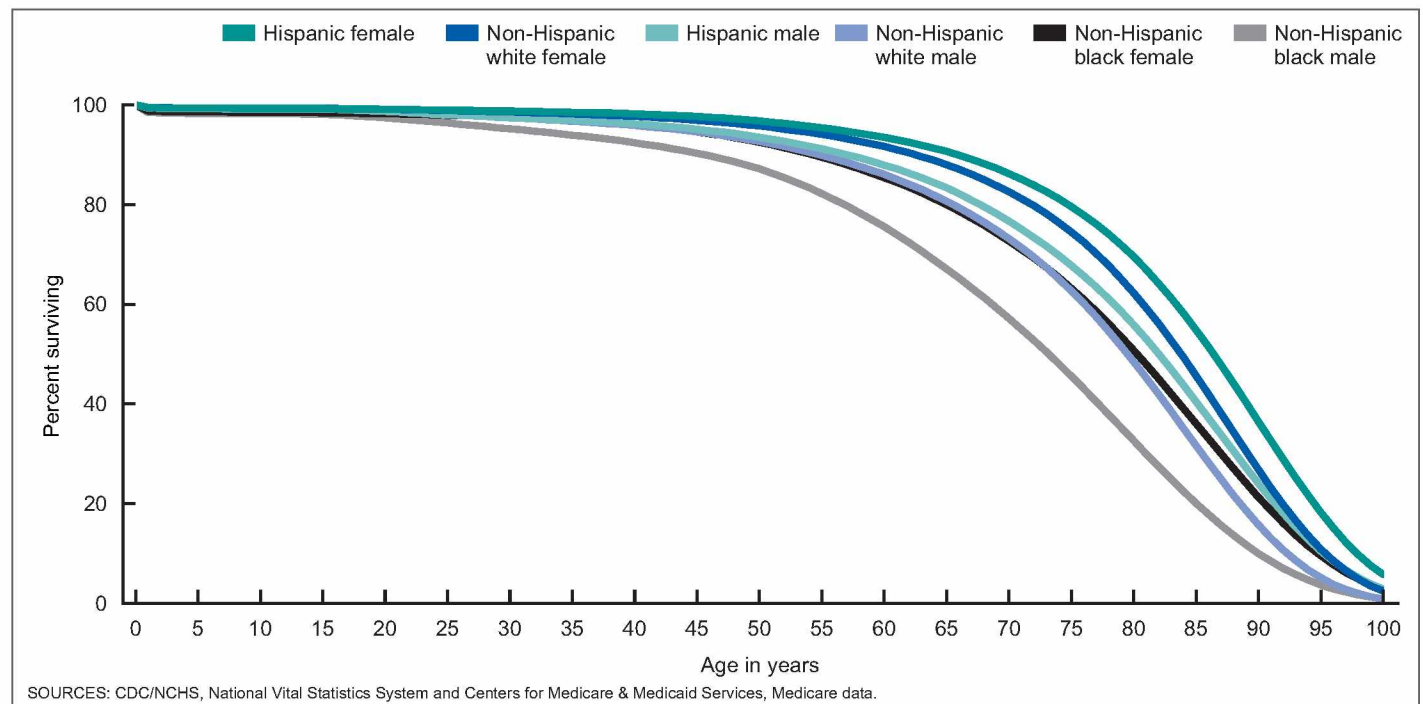
In 2007, 99.5 percent of Hispanic infants survived the first year of life. In comparison, 99.4 percent of non-Hispanic white and 98.7 percent of non-Hispanic black infants survived the first year of life. For both the Hispanic and non-Hispanic white populations,

98.9 percent survived to age 20, while 97.9 percent of the non-Hispanic black population survived to age 20. By age 65, the Hispanic population had a clear survival advantage in comparison to the other two populations. For the Hispanic population, 86.9 percent survived to age 65, while 84.3 percent of the non-Hispanic white and 73.8 percent of the non-Hispanic black populations did so. The Hispanic survival advantage increases with age so that by age 85, 48.2 of the Hispanic population has survived, while 39 percent of the non-Hispanic white and 28.5 percent of the non-Hispanic black populations have done so.

Among the six Hispanic origin-race-sex groups, Hispanic females had the highest median age at death with 51.5 percent surviving to age 86 (Figure 3). The next highest median age at death was for non-Hispanic white females with 49.5 percent surviving to age 84. Hispanic males had 50.1 percent surviving to age 82, followed by non-Hispanic black females with 50.8 percent surviving to age 80, non-Hispanic white males with 48.5 percent surviving to age 80, and finally non-Hispanic black males with 50.5 percent surviving to age 73.

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SOURCES: CDC/NCHS, National Vital Statistics System and Centers for Medicare & Medicaid Services, Medicare data.

Figure 3. Percentage surviving, by Hispanic origin, race, age, and sex: United States, 2007

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Table 1. Life table for the total population: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table01.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.006761	100,000	676	99,406	7,793,398	77.9
1-2	0.000460	99,324	46	99,301	7,693,992	77.5
2-3	0.000286	99,278	28	99,264	7,594,691	76.5
3-4	0.000218	99,250	22	99,239	7,495,427	75.5
4-5	0.000176	99,228	17	99,219	7,396,188	74.5
5-6	0.000164	99,211	16	99,203	7,296,969	73.6
6-7	0.000151	99,194	15	99,187	7,197,766	72.6
7-8	0.000140	99,179	14	99,173	7,098,579	71.6
8-9	0.000124	99,166	12	99,159	6,999,407	70.6
9-10	0.000105	99,153	10	99,148	6,900,247	69.6
10-11	0.000091	99,143	9	99,138	6,801,099	68.6
11-12	0.000094	99,134	9	99,129	6,701,961	67.6
12-13	0.000132	99,125	13	99,118	6,602,831	66.6
13-14	0.000209	99,112	21	99,101	6,503,713	65.6
14-15	0.000314	99,091	31	99,075	6,404,612	64.6
15-16	0.000426	99,060	42	99,039	6,305,537	63.7
16-17	0.000529	99,018	52	98,991	6,206,498	62.7
17-18	0.000627	98,965	62	98,934	6,107,506	61.7
18-19	0.000715	98,903	71	98,868	6,008,572	60.8
19-20	0.000796	98,832	79	98,793	5,909,705	59.8
20-21	0.000881	98,754	87	98,710	5,810,911	58.8
21-22	0.000963	98,667	95	98,619	5,712,201	57.9
22-23	0.001017	98,572	100	98,522	5,613,582	56.9
23-24	0.001034	98,472	102	98,421	5,515,060	56.0
24-25	0.001023	98,370	101	98,320	5,416,639	55.1
25-26	0.001003	98,269	99	98,220	5,318,320	54.1
26-27	0.000990	98,171	97	98,122	5,220,100	53.2
27-28	0.000983	98,074	96	98,025	5,121,978	52.2
28-29	0.000988	97,977	97	97,929	5,023,952	51.3
29-30	0.001005	97,880	98	97,831	4,926,023	50.3
30-31	0.001030	97,782	101	97,732	4,828,192	49.4
31-32	0.001060	97,681	104	97,630	4,730,460	48.4
32-33	0.001099	97,578	107	97,524	4,632,831	47.5
33-34	0.001146	97,471	112	97,415	4,535,307	46.5
34-35	0.001201	97,359	117	97,300	4,437,892	45.6
35-36	0.001264	97,242	123	97,180	4,340,592	44.6
36-37	0.001340	97,119	130	97,054	4,243,412	43.7
37-38	0.001434	96,989	139	96,919	4,146,358	42.8
38-39	0.001548	96,850	150	96,775	4,049,438	41.8
39-40	0.001685	96,700	163	96,618	3,952,664	40.9
40-41	0.001836	96,537	177	96,448	3,856,045	39.9
41-42	0.002000	96,360	193	96,263	3,759,597	39.0
42-43	0.002188	96,167	210	96,062	3,663,334	38.1
43-44	0.002400	95,956	230	95,841	3,567,272	37.2
44-45	0.002629	95,726	252	95,600	3,471,431	36.3
45-46	0.002864	95,475	273	95,338	3,375,831	35.4
46-47	0.003107	95,201	296	95,053	3,280,493	34.5
47-48	0.003369	94,905	320	94,745	3,185,440	33.6
48-49	0.003661	94,586	346	94,412	3,090,694	32.7
49-50	0.003984	94,239	375	94,052	2,996,282	31.8
50-51	0.004337	93,864	407	93,660	2,902,230	30.9
51-52	0.004709	93,457	440	93,237	2,808,570	30.1
52-53	0.005091	93,017	474	92,780	2,715,333	29.2
53-54	0.005474	92,543	507	92,290	2,622,553	28.3
54-55	0.005863	92,037	540	91,767	2,530,263	27.5
55-56	0.006275	91,497	574	91,210	2,438,496	26.7
56-57	0.006726	90,923	612	90,617	2,347,286	25.8
57-58	0.007220	90,311	652	89,985	2,256,669	25.0
58-59	0.007773	89,659	697	89,311	2,166,684	24.2
59-60	0.008389	88,962	746	88,589	2,077,373	23.4
60-61	0.009081	88,216	801	87,816	1,988,784	22.5
61-62	0.009839	87,415	860	86,985	1,900,968	21.7
62-63	0.010657	86,555	922	86,094	1,813,983	21.0
63-64	0.011534	85,632	988	85,139	1,727,890	20.2
64-65	0.012491	84,645	1,057	84,116	1,642,751	19.4

Table 1. Life table for the total population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table01.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.013600	83,587	1,137	83,019	1,558,635	18.6
66-67	0.014722	82,451	1,214	81,844	1,475,616	17.9
67-68	0.015959	81,237	1,296	80,589	1,393,772	17.2
68-69	0.017288	79,940	1,382	79,249	1,313,183	16.4
69-70	0.018755	78,558	1,473	77,822	1,233,934	15.7
70-71	0.020424	77,085	1,574	76,298	1,156,112	15.0
71-72	0.022385	75,511	1,690	74,666	1,079,814	14.3
72-73	0.024679	73,820	1,822	72,909	1,005,149	13.6
73-74	0.027320	71,999	1,967	71,015	932,239	12.9
74-75	0.030299	70,032	2,122	68,971	861,224	12.3
75-76	0.033636	67,910	2,284	66,768	792,254	11.7
76-77	0.037216	65,625	2,442	64,404	725,486	11.1
77-78	0.041160	63,183	2,601	61,883	661,082	10.5
78-79	0.045503	60,583	2,757	59,204	599,199	9.9
79-80	0.050281	57,826	2,908	56,372	539,995	9.3
80-81	0.055531	54,918	3,050	53,393	483,622	8.8
81-82	0.061293	51,869	3,179	50,279	430,229	8.3
82-83	0.067611	48,689	3,292	47,044	379,950	7.8
83-84	0.074528	45,398	3,383	43,706	332,906	7.3
84-85	0.082091	42,014	3,449	40,290	289,201	6.9
85-86	0.090346	38,565	3,484	36,823	248,911	6.5
86-87	0.099341	35,081	3,485	33,338	212,088	6.0
87-88	0.109125	31,596	3,448	29,872	178,749	5.7
88-89	0.119744	28,148	3,371	26,463	148,877	5.3
89-90	0.131244	24,778	3,252	23,152	122,415	4.9
90-91	0.143668	21,526	3,093	19,979	99,263	4.6
91-92	0.157056	18,433	2,895	16,986	79,284	4.3
92-93	0.171442	15,538	2,664	14,206	62,298	4.0
93-94	0.186853	12,874	2,406	11,671	48,092	3.7
94-95	0.203309	10,469	2,128	9,404	36,420	3.5
95-96	0.220822	8,340	1,842	7,419	27,016	3.2
96-97	0.239389	6,499	1,556	5,721	19,597	3.0
97-98	0.258999	4,943	1,280	4,303	13,876	2.8
98-99	0.279625	3,663	1,024	3,151	9,573	2.6
99-100	0.301225	2,638	795	2,241	6,422	2.4
100 and over	1.000000	1,844	1,844	4,181	4,181	2.3

Table 2. Life table for males: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table02.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.007390	100,000	739	99,352	7,537,883	75.4
1-2	0.000490	99,261	49	99,237	7,438,531	74.9
2-3	0.000316	99,212	31	99,197	7,339,295	74.0
3-4	0.000242	99,181	24	99,169	7,240,098	73.0
4-5	0.000201	99,157	20	99,147	7,140,929	72.0
5-6	0.000182	99,137	18	99,128	7,041,782	71.0
6-7	0.000170	99,119	17	99,111	6,942,654	70.0
7-8	0.000156	99,102	15	99,095	6,843,543	69.1
8-9	0.000134	99,087	13	99,080	6,744,448	68.1
9-10	0.000107	99,074	11	99,068	6,645,368	67.1
10-11	0.000085	99,063	8	99,059	6,546,300	66.1
11-12	0.000089	99,055	9	99,050	6,447,241	65.1
12-13	0.000143	99,046	14	99,039	6,348,191	64.1
13-14	0.000256	99,032	25	99,019	6,249,153	63.1
14-15	0.000411	99,006	41	98,986	6,150,134	62.1
15-16	0.000573	98,966	57	98,937	6,051,148	61.1
16-17	0.000725	98,909	72	98,873	5,952,211	60.2
17-18	0.000873	98,837	86	98,794	5,853,338	59.2
18-19	0.001014	98,751	100	98,701	5,754,544	58.3
19-20	0.001149	98,651	113	98,594	5,655,843	57.3
20-21	0.001292	98,537	127	98,474	5,557,249	56.4
21-22	0.001427	98,410	140	98,340	5,458,775	55.5
22-23	0.001512	98,270	149	98,195	5,360,435	54.5
23-24	0.001529	98,121	150	98,046	5,262,240	53.6
24-25	0.001497	97,971	147	97,898	5,164,194	52.7
25-26	0.001448	97,824	142	97,754	5,066,296	51.8
26-27	0.001409	97,683	138	97,614	4,968,543	50.9
27-28	0.001382	97,545	135	97,478	4,870,929	49.9
28-29	0.001376	97,410	134	97,343	4,773,451	49.0
29-30	0.001390	97,276	135	97,209	4,676,108	48.1
30-31	0.001412	97,141	137	97,072	4,578,899	47.1
31-32	0.001437	97,004	139	96,934	4,481,827	46.2
32-33	0.001474	96,864	143	96,793	4,384,893	45.3
33-34	0.001516	96,722	147	96,648	4,288,100	44.3
34-35	0.001570	96,575	152	96,499	4,191,451	43.4
35-36	0.001634	96,423	158	96,345	4,094,952	42.5
36-37	0.001716	96,266	165	96,183	3,998,607	41.5
37-38	0.001821	96,101	175	96,013	3,902,424	40.6
38-39	0.001956	95,926	188	95,832	3,806,411	39.7
39-40	0.002120	95,738	203	95,636	3,710,579	38.8
40-41	0.002303	95,535	220	95,425	3,614,943	37.8
41-42	0.002505	95,315	239	95,196	3,519,518	36.9
42-43	0.002735	95,076	260	94,946	3,424,322	36.0
43-44	0.002992	94,816	284	94,674	3,329,376	35.1
44-45	0.003270	94,533	309	94,378	3,234,702	34.2
45-46	0.003556	94,223	335	94,056	3,140,324	33.3
46-47	0.003855	93,888	362	93,707	3,046,268	32.4
47-48	0.004187	93,526	392	93,331	2,952,560	31.6
48-49	0.004570	93,135	426	92,922	2,859,230	30.7
49-50	0.005001	92,709	464	92,477	2,766,308	29.8
50-51	0.005474	92,246	505	91,993	2,673,831	29.0
51-52	0.005969	91,741	548	91,467	2,581,838	28.1
52-53	0.006473	91,193	590	90,898	2,490,371	27.3
53-54	0.006971	90,603	632	90,287	2,399,473	26.5
54-55	0.007469	89,971	672	89,635	2,309,186	25.7
55-56	0.007995	89,299	714	88,942	2,219,551	24.9
56-57	0.008567	88,585	759	88,206	2,130,609	24.1
57-58	0.009179	87,826	806	87,423	2,042,403	23.3
58-59	0.009843	87,020	857	86,592	1,954,980	22.5
59-60	0.010571	86,164	911	85,708	1,868,389	21.7
60-61	0.011378	85,253	970	84,768	1,782,680	20.9
61-62	0.012264	84,283	1,034	83,766	1,697,913	20.1
62-63	0.013227	83,249	1,101	82,699	1,614,147	19.4
63-64	0.014275	82,148	1,173	81,562	1,531,448	18.6
64-65	0.015434	80,975	1,250	80,350	1,449,887	17.9

Table 2. Life table for males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table02.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.016771	79,726	1,337	79,057	1,369,536	17.2
66-67	0.018156	78,388	1,423	77,677	1,290,479	16.5
67-68	0.019682	76,965	1,515	76,208	1,212,802	15.8
68-69	0.021327	75,450	1,609	74,646	1,136,594	15.1
69-70	0.023144	73,841	1,709	72,987	1,061,948	14.4
70-71	0.025204	72,132	1,818	71,223	988,962	13.7
71-72	0.027616	70,314	1,942	69,343	917,738	13.1
72-73	0.030417	68,373	2,080	67,333	848,395	12.4
73-74	0.033598	66,293	2,227	65,179	781,062	11.8
74-75	0.037153	64,066	2,380	62,875	715,883	11.2
75-76	0.041097	61,685	2,535	60,418	653,008	10.6
76-77	0.045315	59,150	2,680	57,810	592,590	10.0
77-78	0.049944	56,470	2,820	55,060	534,780	9.5
78-79	0.055019	53,649	2,952	52,174	479,720	8.9
79-80	0.060576	50,698	3,071	49,162	427,547	8.4
80-81	0.066655	47,627	3,175	46,039	378,384	7.9
81-82	0.073296	44,452	3,258	42,823	332,345	7.5
82-83	0.080542	41,194	3,318	39,535	289,522	7.0
83-84	0.088435	37,876	3,350	36,201	249,987	6.6
84-85	0.097021	34,527	3,350	32,852	213,785	6.2
85-86	0.106343	31,177	3,315	29,519	180,934	5.8
86-87	0.116446	27,861	3,244	26,239	151,415	5.4
87-88	0.127371	24,617	3,135	23,049	125,175	5.1
88-89	0.139160	21,482	2,989	19,987	102,126	4.8
89-90	0.151850	18,492	2,808	17,088	82,139	4.4
90-91	0.165475	15,684	2,595	14,386	65,051	4.1
91-92	0.180063	13,089	2,357	11,910	50,665	3.9
92-93	0.195635	10,732	2,100	9,682	38,754	3.6
93-94	0.212205	8,632	1,832	7,717	29,072	3.4
94-95	0.229779	6,801	1,563	6,019	21,355	3.1
95-96	0.248348	5,238	1,301	4,588	15,336	2.9
96-97	0.267897	3,937	1,055	3,410	10,749	2.7
97-98	0.288394	2,882	831	2,467	7,339	2.5
98-99	0.309795	2,051	635	1,733	4,872	2.4
99-100	0.332043	1,416	470	1,181	3,139	2.2
100 and over	1.000000	946	946	1,958	1,958	2.1

Table 3. Life table for females: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table03.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.006103	100,000	610	99,464	8,040,632	80.4
1-2	0.000430	99,390	43	99,368	7,941,168	79.9
2-3	0.000255	99,347	25	99,334	7,841,800	78.9
3-4	0.000193	99,322	19	99,312	7,742,465	78.0
4-5	0.000149	99,303	15	99,295	7,643,153	77.0
5-6	0.000145	99,288	14	99,281	7,543,858	76.0
6-7	0.000132	99,273	13	99,267	7,444,577	75.0
7-8	0.000122	99,260	12	99,254	7,345,311	74.0
8-9	0.000112	99,248	11	99,243	7,246,057	73.0
9-10	0.000103	99,237	10	99,232	7,146,814	72.0
10-11	0.000096	99,227	10	99,222	7,047,582	71.0
11-12	0.000100	99,217	10	99,212	6,948,360	70.0
12-13	0.000120	99,207	12	99,201	6,849,148	69.0
13-14	0.000160	99,195	16	99,188	6,749,947	68.0
14-15	0.000212	99,180	21	99,169	6,650,759	67.1
15-16	0.000271	99,159	27	99,145	6,551,590	66.1
16-17	0.000325	99,132	32	99,116	6,452,445	65.1
17-18	0.000369	99,100	37	99,081	6,353,329	64.1
18-19	0.000400	99,063	40	99,043	6,254,248	63.1
19-20	0.000422	99,023	42	99,003	6,155,205	62.2
20-21	0.000443	98,982	44	98,960	6,056,202	61.2
21-22	0.000467	98,938	46	98,915	5,957,243	60.2
22-23	0.000488	98,892	48	98,868	5,858,328	59.2
23-24	0.000504	98,843	50	98,818	5,759,460	58.3
24-25	0.000518	98,794	51	98,768	5,660,642	57.3
25-26	0.000532	98,742	53	98,716	5,561,874	56.3
26-27	0.000548	98,690	54	98,663	5,463,158	55.4
27-28	0.000565	98,636	56	98,608	5,364,495	54.4
28-29	0.000583	98,580	57	98,551	5,265,887	53.4
29-30	0.000605	98,523	60	98,493	5,167,336	52.4
30-31	0.000634	98,463	62	98,432	5,068,843	51.5
31-32	0.000670	98,401	66	98,368	4,970,411	50.5
32-33	0.000714	98,335	70	98,300	4,872,043	49.5
33-34	0.000767	98,264	75	98,227	4,773,744	48.6
34-35	0.000824	98,189	81	98,149	4,675,517	47.6
35-36	0.000887	98,108	87	98,065	4,577,369	46.7
36-37	0.000959	98,021	94	97,974	4,479,304	45.7
37-38	0.001040	97,927	102	97,876	4,381,330	44.7
38-39	0.001137	97,825	111	97,770	4,283,454	43.8
39-40	0.001248	97,714	122	97,653	4,185,684	42.8
40-41	0.001367	97,592	133	97,525	4,088,031	41.9
41-42	0.001495	97,459	146	97,386	3,990,505	40.9
42-43	0.001644	97,313	160	97,233	3,893,120	40.0
43-44	0.001812	97,153	176	97,065	3,795,887	39.1
44-45	0.001994	96,977	193	96,880	3,698,822	38.1
45-46	0.002182	96,784	211	96,678	3,601,941	37.2
46-47	0.002373	96,572	229	96,458	3,505,263	36.3
47-48	0.002569	96,343	247	96,220	3,408,805	35.4
48-49	0.002775	96,096	267	95,962	3,312,586	34.5
49-50	0.002995	95,829	287	95,686	3,216,623	33.6
50-51	0.003236	95,542	309	95,388	3,120,938	32.7
51-52	0.003494	95,233	333	95,067	3,025,550	31.8
52-53	0.003763	94,900	357	94,722	2,930,484	30.9
53-54	0.004041	94,543	382	94,352	2,835,762	30.0
54-55	0.004330	94,161	408	93,957	2,741,410	29.1
55-56	0.004639	93,753	435	93,536	2,647,452	28.2
56-57	0.004981	93,319	465	93,086	2,553,916	27.4
57-58	0.005372	92,854	499	92,604	2,460,830	26.5
58-59	0.005826	92,355	538	92,086	2,368,226	25.6
59-60	0.006347	91,817	583	91,525	2,276,140	24.8
60-61	0.006942	91,234	633	90,917	2,184,615	23.9
61-62	0.007595	90,601	688	90,257	2,093,697	23.1
62-63	0.008293	89,913	746	89,540	2,003,441	22.3
63-64	0.009029	89,167	805	88,764	1,913,901	21.5
64-65	0.009826	88,362	868	87,928	1,825,136	20.7

Table 3. Life table for females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table03.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.010753	87,494	941	87,023	1,737,208	19.9
66-67	0.011692	86,553	1,012	86,047	1,650,185	19.1
67-68	0.012722	85,541	1,088	84,997	1,564,138	18.3
68-69	0.013830	84,453	1,168	83,869	1,479,141	17.5
69-70	0.015062	83,285	1,254	82,657	1,395,273	16.8
70-71	0.016484	82,030	1,352	81,354	1,312,615	16.0
71-72	0.018170	80,678	1,466	79,945	1,231,261	15.3
72-73	0.020151	79,212	1,596	78,414	1,151,316	14.5
73-74	0.022445	77,616	1,742	76,745	1,072,902	13.8
74-75	0.025056	75,874	1,901	74,923	996,157	13.1
75-76	0.028016	73,973	2,072	72,937	921,234	12.5
76-77	0.031215	71,900	2,244	70,778	848,297	11.8
77-78	0.034767	69,656	2,422	68,445	777,519	11.2
78-79	0.038707	67,234	2,602	65,933	709,074	10.5
79-80	0.043073	64,632	2,784	63,240	643,141	10.0
80-81	0.047907	61,848	2,963	60,366	579,901	9.4
81-82	0.053254	58,885	3,136	57,317	519,534	8.8
82-83	0.059160	55,749	3,298	54,100	462,217	8.3
83-84	0.065676	52,451	3,445	50,729	408,117	7.8
84-85	0.072854	49,006	3,570	47,221	357,389	7.3
85-86	0.080749	45,436	3,669	43,601	310,168	6.8
86-87	0.089416	41,767	3,735	39,900	266,566	6.4
87-88	0.098914	38,032	3,762	36,151	226,666	6.0
88-89	0.109300	34,270	3,746	32,398	190,515	5.6
89-90	0.120630	30,525	3,682	28,684	158,117	5.2
90-91	0.132959	26,842	3,569	25,058	129,434	4.8
91-92	0.146339	23,274	3,406	21,571	104,376	4.5
92-93	0.160816	19,868	3,195	18,270	82,805	4.2
93-94	0.176428	16,673	2,942	15,202	64,535	3.9
94-95	0.193208	13,731	2,653	12,405	49,333	3.6
95-96	0.211174	11,078	2,339	9,908	36,928	3.3
96-97	0.230333	8,739	2,013	7,732	27,020	3.1
97-98	0.250679	6,726	1,686	5,883	19,288	2.9
98-99	0.272186	5,040	1,372	4,354	13,405	2.7
99-100	0.294812	3,668	1,081	3,127	9,051	2.5
100 and over	1.000000	2,587	2,587	5,923	5,923	2.3

Table 4. Life table for the white population: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table04.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005642	100,000	564	99,505	7,835,766	78.4
1-2	0.000421	99,436	42	99,415	7,736,261	77.8
2-3	0.000256	99,394	25	99,381	7,636,846	76.8
3-4	0.000199	99,368	20	99,359	7,537,465	75.9
4-5	0.000154	99,349	15	99,341	7,438,106	74.9
5-6	0.000152	99,333	15	99,326	7,338,765	73.9
6-7	0.000143	99,318	14	99,311	7,239,439	72.9
7-8	0.000134	99,304	13	99,297	7,140,128	71.9
8-9	0.000119	99,291	12	99,285	7,040,830	70.9
9-10	0.000100	99,279	10	99,274	6,941,545	69.9
10-11	0.000085	99,269	8	99,265	6,842,271	68.9
11-12	0.000087	99,261	9	99,256	6,743,006	67.9
12-13	0.000121	99,252	12	99,246	6,643,750	66.9
13-14	0.000194	99,240	19	99,231	6,544,504	65.9
14-15	0.000294	99,221	29	99,206	6,445,273	65.0
15-16	0.000401	99,192	40	99,172	6,346,067	64.0
16-17	0.000500	99,152	50	99,127	6,246,895	63.0
17-18	0.000593	99,102	59	99,073	6,147,768	62.0
18-19	0.000677	99,044	67	99,010	6,048,695	61.1
19-20	0.000754	98,977	75	98,939	5,949,685	60.1
20-21	0.000835	98,902	83	98,861	5,850,746	59.2
21-22	0.000912	98,819	90	98,774	5,751,885	58.2
22-23	0.000962	98,729	95	98,682	5,653,111	57.3
23-24	0.000976	98,634	96	98,586	5,554,429	56.3
24-25	0.000963	98,538	95	98,491	5,455,843	55.4
25-26	0.000942	98,443	93	98,397	5,357,352	54.4
26-27	0.000927	98,350	91	98,305	5,258,955	53.5
27-28	0.000919	98,259	90	98,214	5,160,651	52.5
28-29	0.000923	98,169	91	98,124	5,062,437	51.6
29-30	0.000939	98,078	92	98,032	4,964,313	50.6
30-31	0.000962	97,986	94	97,939	4,866,281	49.7
31-32	0.000991	97,892	97	97,844	4,768,341	48.7
32-33	0.001027	97,795	100	97,745	4,670,498	47.8
33-34	0.001070	97,695	105	97,642	4,572,753	46.8
34-35	0.001119	97,590	109	97,535	4,475,111	45.9
35-36	0.001176	97,481	115	97,424	4,377,575	44.9
36-37	0.001246	97,366	121	97,306	4,280,152	44.0
37-38	0.001334	97,245	130	97,180	4,182,846	43.0
38-39	0.001443	97,115	140	97,045	4,085,666	42.1
39-40	0.001574	96,975	153	96,899	3,988,621	41.1
40-41	0.001717	96,822	166	96,739	3,891,722	40.2
41-42	0.001873	96,656	181	96,566	3,794,983	39.3
42-43	0.002051	96,475	198	96,376	3,698,417	38.3
43-44	0.002252	96,277	217	96,169	3,602,041	37.4
44-45	0.002467	96,060	237	95,942	3,505,872	36.5
45-46	0.002689	95,823	258	95,695	3,409,930	35.6
46-47	0.002916	95,566	279	95,427	3,314,236	34.7
47-48	0.003160	95,287	301	95,137	3,218,809	33.8
48-49	0.003428	94,986	326	94,823	3,123,672	32.9
49-50	0.003723	94,661	352	94,484	3,028,849	32.0
50-51	0.004048	94,308	382	94,117	2,934,365	31.1
51-52	0.004393	93,926	413	93,720	2,840,248	30.2
52-53	0.004748	93,514	444	93,292	2,746,528	29.4
53-54	0.005106	93,070	475	92,832	2,653,236	28.5
54-55	0.005472	92,594	507	92,341	2,560,404	27.7
55-56	0.005860	92,088	540	91,818	2,468,063	26.8
56-57	0.006288	91,548	576	91,260	2,376,245	26.0
57-58	0.006770	90,972	616	90,665	2,284,985	25.1
58-59	0.007322	90,357	662	90,026	2,194,320	24.3
59-60	0.007945	89,695	713	89,339	2,104,295	23.5
60-61	0.008644	88,982	769	88,598	2,014,956	22.6
61-62	0.009403	88,213	830	87,798	1,926,358	21.8
62-63	0.010213	87,384	892	86,937	1,838,560	21.0
63-64	0.011075	86,491	958	86,012	1,751,622	20.3
64-65	0.012020	85,533	1,028	85,019	1,665,610	19.5

Table 4. Life table for the white population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table04.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.013127	84,505	1,109	83,951	1,580,591	18.7
66-67	0.014266	83,396	1,190	82,801	1,496,640	17.9
67-68	0.015515	82,206	1,275	81,568	1,413,839	17.2
68-69	0.016846	80,931	1,363	80,249	1,332,271	16.5
69-70	0.018308	79,567	1,457	78,839	1,252,022	15.7
70-71	0.019972	78,111	1,560	77,331	1,173,183	15.0
71-72	0.021935	76,551	1,679	75,711	1,095,852	14.3
72-73	0.024232	74,872	1,814	73,964	1,020,141	13.6
73-74	0.026874	73,057	1,963	72,076	946,177	13.0
74-75	0.029848	71,094	2,122	70,033	874,101	12.3
75-76	0.033177	68,972	2,288	67,828	804,068	11.7
76-77	0.036777	66,684	2,452	65,457	736,240	11.0
77-78	0.040751	64,231	2,617	62,922	670,783	10.4
78-79	0.045134	61,614	2,781	60,223	607,861	9.9
79-80	0.049965	58,833	2,940	57,363	547,637	9.3
80-81	0.055282	55,893	3,090	54,348	490,274	8.8
81-82	0.061129	52,803	3,228	51,190	435,926	8.3
82-83	0.067550	49,576	3,349	47,901	384,736	7.8
83-84	0.074592	46,227	3,448	44,503	336,835	7.3
84-85	0.082303	42,779	3,521	41,018	292,332	6.8
85-86	0.090733	39,258	3,562	37,477	251,314	6.4
86-87	0.099933	35,696	3,567	33,912	213,837	6.0
87-88	0.109953	32,129	3,533	30,362	179,925	5.6
88-89	0.120842	28,596	3,456	26,868	149,563	5.2
89-90	0.132649	25,140	3,335	23,473	122,694	4.9
90-91	0.145419	21,806	3,171	20,220	99,221	4.6
91-92	0.159193	18,635	2,967	17,151	79,001	4.2
92-93	0.174006	15,668	2,726	14,305	61,850	3.9
93-94	0.189885	12,942	2,457	11,713	47,545	3.7
94-95	0.206851	10,484	2,169	9,400	35,832	3.4
95-96	0.224912	8,316	1,870	7,380	26,432	3.2
96-97	0.244065	6,445	1,573	5,659	19,051	3.0
97-98	0.264293	4,872	1,288	4,228	13,393	2.7
98-99	0.285564	3,585	1,024	3,073	9,164	2.6
99-100	0.307830	2,561	788	2,167	6,092	2.4
100 and over	1.000000	1,773	1,773	3,925	3,925	2.2

Table 5. Life table for white males: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table05.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.006176	100,000	618	99,458	7,589,184	75.9
1-2	0.000442	99,382	44	99,360	7,489,726	75.4
2-3	0.000286	99,338	28	99,324	7,390,366	74.4
3-4	0.000222	99,310	22	99,299	7,291,041	73.4
4-5	0.000181	99,288	18	99,279	7,191,742	72.4
5-6	0.000169	99,270	17	99,262	7,092,463	71.4
6-7	0.000159	99,253	16	99,245	6,993,201	70.5
7-8	0.000147	99,238	15	99,230	6,893,956	69.5
8-9	0.000127	99,223	13	99,217	6,794,725	68.5
9-10	0.000101	99,210	10	99,205	6,695,509	67.5
10-11	0.000080	99,200	8	99,196	6,596,303	66.5
11-12	0.000084	99,192	8	99,188	6,497,107	65.5
12-13	0.000132	99,184	13	99,178	6,397,918	64.5
13-14	0.000235	99,171	23	99,160	6,298,741	63.5
14-15	0.000376	99,148	37	99,129	6,199,581	62.5
15-16	0.000524	99,111	52	99,085	6,100,452	61.6
16-17	0.000662	99,059	66	99,026	6,001,367	60.6
17-18	0.000800	98,993	79	98,954	5,902,341	59.6
18-19	0.000937	98,914	93	98,868	5,803,388	58.7
19-20	0.001068	98,821	106	98,769	5,704,520	57.7
20-21	0.001209	98,716	119	98,656	5,605,752	56.8
21-22	0.001338	98,596	132	98,530	5,507,096	55.9
22-23	0.001419	98,464	140	98,395	5,408,565	54.9
23-24	0.001435	98,325	141	98,254	5,310,171	54.0
24-25	0.001402	98,184	138	98,115	5,211,916	53.1
25-26	0.001353	98,046	133	97,980	5,113,802	52.2
26-27	0.001314	97,913	129	97,849	5,015,822	51.2
27-28	0.001286	97,785	126	97,722	4,917,973	50.3
28-29	0.001280	97,659	125	97,597	4,820,251	49.4
29-30	0.001293	97,534	126	97,471	4,722,654	48.4
30-31	0.001314	97,408	128	97,344	4,625,183	47.5
31-32	0.001338	97,280	130	97,215	4,527,839	46.5
32-33	0.001372	97,150	133	97,083	4,430,625	45.6
33-34	0.001412	97,016	137	96,948	4,333,541	44.7
34-35	0.001462	96,879	142	96,809	4,236,594	43.7
35-36	0.001522	96,738	147	96,664	4,139,785	42.8
36-37	0.001600	96,590	155	96,513	4,043,121	41.9
37-38	0.001701	96,436	164	96,354	3,946,608	40.9
38-39	0.001830	96,272	176	96,184	3,850,254	40.0
39-40	0.001989	96,096	191	96,000	3,754,070	39.1
40-41	0.002165	95,905	208	95,801	3,658,070	38.1
41-42	0.002357	95,697	226	95,584	3,562,269	37.2
42-43	0.002578	95,471	246	95,348	3,466,684	36.3
43-44	0.002826	95,225	269	95,091	3,371,336	35.4
44-45	0.003092	94,956	294	94,809	3,276,245	34.5
45-46	0.003366	94,663	319	94,503	3,181,436	33.6
46-47	0.003649	94,344	344	94,172	3,086,933	32.7
47-48	0.003960	94,000	372	93,814	2,992,761	31.8
48-49	0.004311	93,627	404	93,426	2,898,947	31.0
49-50	0.004704	93,224	439	93,005	2,805,522	30.1
50-51	0.005136	92,785	476	92,547	2,712,517	29.2
51-52	0.005589	92,309	516	92,051	2,619,970	28.4
52-53	0.006051	91,793	555	91,515	2,527,919	27.5
53-54	0.006509	91,237	594	90,941	2,436,404	26.7
54-55	0.006970	90,644	632	90,328	2,345,463	25.9
55-56	0.007456	90,012	671	89,676	2,255,136	25.1
56-57	0.007989	89,341	714	88,984	2,165,460	24.2
57-58	0.008575	88,627	760	88,247	2,076,476	23.4
58-59	0.009233	87,867	811	87,461	1,988,229	22.6
59-60	0.009965	87,056	867	86,622	1,900,767	21.8
60-61	0.010779	86,188	929	85,724	1,814,146	21.0
61-62	0.011664	85,259	994	84,762	1,728,422	20.3
62-63	0.012617	84,265	1,063	83,733	1,643,660	19.5
63-64	0.013648	83,202	1,136	82,634	1,559,927	18.7
64-65	0.014789	82,066	1,214	81,459	1,477,293	18.0

Table 5. Life table for white males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table05.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.016124	80,852	1,304	80,201	1,395,833	17.3
66-67	0.017519	79,549	1,394	78,852	1,315,633	16.5
67-68	0.019057	78,155	1,489	77,410	1,236,781	15.8
68-69	0.020699	76,666	1,587	75,872	1,159,370	15.1
69-70	0.022496	75,079	1,689	74,234	1,083,498	14.4
70-71	0.024522	73,390	1,800	72,490	1,009,264	13.8
71-72	0.026901	71,590	1,926	70,627	936,774	13.1
72-73	0.029683	69,664	2,068	68,630	866,147	12.4
73-74	0.032880	67,596	2,223	66,485	797,516	11.8
74-75	0.036455	65,374	2,383	64,182	731,031	11.2
75-76	0.040419	62,991	2,546	61,718	666,849	10.6
76-77	0.044669	60,445	2,700	59,095	605,131	10.0
77-78	0.049343	57,745	2,849	56,320	546,036	9.5
78-79	0.054479	54,895	2,991	53,400	489,716	8.9
79-80	0.060115	51,905	3,120	50,345	436,316	8.4
80-81	0.066293	48,785	3,234	47,168	385,971	7.9
81-82	0.073057	45,550	3,328	43,887	338,804	7.4
82-83	0.080451	42,223	3,397	40,524	294,917	7.0
83-84	0.088523	38,826	3,437	37,107	254,393	6.6
84-85	0.097319	35,389	3,444	33,667	217,286	6.1
85-86	0.106886	31,945	3,414	30,238	183,619	5.7
86-87	0.117271	28,530	3,346	26,858	153,381	5.4
87-88	0.128520	25,185	3,237	23,566	126,524	5.0
88-89	0.140677	21,948	3,088	20,404	102,958	4.7
89-90	0.153780	18,860	2,900	17,410	82,553	4.4
90-91	0.167866	15,960	2,679	14,620	65,143	4.1
91-92	0.182962	13,281	2,430	12,066	50,523	3.8
92-93	0.199092	10,851	2,160	9,771	38,457	3.5
93-94	0.216267	8,691	1,879	7,751	28,686	3.3
94-95	0.234490	6,811	1,597	6,013	20,935	3.1
95-96	0.253751	5,214	1,323	4,552	14,923	2.9
96-97	0.274028	3,891	1,066	3,358	10,370	2.7
97-98	0.295285	2,825	834	2,408	7,013	2.5
98-99	0.317469	1,991	632	1,675	4,605	2.3
99-100	0.340514	1,359	463	1,127	2,930	2.2
100 and over	1.000000	896	896	1,803	1,803	2.0

Table 6. Life table for white females: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table06.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005083	100,000	508	99,554	8,076,609	80.8
1-2	0.000399	99,492	40	99,472	7,977,055	80.2
2-3	0.000225	99,452	22	99,441	7,877,583	79.2
3-4	0.000175	99,430	17	99,421	7,778,142	78.2
4-5	0.000125	99,412	12	99,406	7,678,721	77.2
5-6	0.000135	99,400	13	99,393	7,579,315	76.3
6-7	0.000127	99,387	13	99,380	7,479,922	75.3
7-8	0.000120	99,374	12	99,368	7,380,542	74.3
8-9	0.000110	99,362	11	99,357	7,281,174	73.3
9-10	0.000099	99,351	10	99,346	7,181,817	72.3
10-11	0.000090	99,341	9	99,337	7,082,471	71.3
11-12	0.000090	99,332	9	99,328	6,983,134	70.3
12-13	0.000109	99,323	11	99,318	6,883,806	69.3
13-14	0.000152	99,313	15	99,305	6,784,488	68.3
14-15	0.000209	99,298	21	99,287	6,685,183	67.3
15-16	0.000272	99,277	27	99,263	6,585,896	66.3
16-17	0.000329	99,250	33	99,234	6,486,633	65.4
17-18	0.000374	99,217	37	99,199	6,387,399	64.4
18-19	0.000403	99,180	40	99,160	6,288,200	63.4
19-20	0.000420	99,140	42	99,119	6,189,040	62.4
20-21	0.000435	99,099	43	99,077	6,089,921	61.5
21-22	0.000453	99,056	45	99,033	5,990,844	60.5
22-23	0.000469	99,011	46	98,987	5,891,811	59.5
23-24	0.000481	98,964	48	98,940	5,792,823	58.5
24-25	0.000491	98,917	49	98,892	5,693,883	57.6
25-26	0.000501	98,868	50	98,843	5,594,990	56.6
26-27	0.000513	98,819	51	98,793	5,496,147	55.6
27-28	0.000526	98,768	52	98,742	5,397,354	54.6
28-29	0.000542	98,716	53	98,689	5,298,612	53.7
29-30	0.000561	98,662	55	98,635	5,199,923	52.7
30-31	0.000588	98,607	58	98,578	5,101,288	51.7
31-32	0.000622	98,549	61	98,519	5,002,710	50.8
32-33	0.000662	98,488	65	98,455	4,904,191	49.8
33-34	0.000708	98,423	70	98,388	4,805,736	48.8
34-35	0.000759	98,353	75	98,316	4,707,348	47.9
35-36	0.000814	98,278	80	98,238	4,609,032	46.9
36-37	0.000878	98,198	86	98,155	4,510,794	45.9
37-38	0.000952	98,112	93	98,065	4,412,639	45.0
38-39	0.001042	98,019	102	97,968	4,314,573	44.0
39-40	0.001146	97,917	112	97,861	4,216,606	43.1
40-41	0.001257	97,804	123	97,743	4,118,745	42.1
41-42	0.001378	97,681	135	97,614	4,021,002	41.2
42-43	0.001515	97,547	148	97,473	3,923,388	40.2
43-44	0.001670	97,399	163	97,318	3,825,915	39.3
44-45	0.001835	97,236	178	97,147	3,728,597	38.3
45-46	0.002006	97,058	195	96,961	3,631,450	37.4
46-47	0.002180	96,863	211	96,758	3,534,489	36.5
47-48	0.002359	96,652	228	96,538	3,437,731	35.6
48-49	0.002547	96,424	246	96,301	3,341,193	34.7
49-50	0.002749	96,179	264	96,046	3,244,892	33.7
50-51	0.002972	95,914	285	95,772	3,148,846	32.8
51-52	0.003214	95,629	307	95,475	3,053,074	31.9
52-53	0.003468	95,322	331	95,157	2,957,598	31.0
53-54	0.003731	94,991	354	94,814	2,862,442	30.1
54-55	0.004010	94,637	379	94,447	2,767,628	29.2
55-56	0.004306	94,257	406	94,054	2,673,181	28.4
56-57	0.004638	93,851	435	93,634	2,579,127	27.5
57-58	0.005026	93,416	469	93,181	2,485,493	26.6
58-59	0.005484	92,947	510	92,692	2,392,311	25.7
59-60	0.006013	92,437	556	92,159	2,299,619	24.9
60-61	0.006614	91,881	608	91,577	2,207,460	24.0
61-62	0.007267	91,273	663	90,942	2,115,883	23.2
62-63	0.007957	90,610	721	90,250	2,024,941	22.3
63-64	0.008679	89,889	780	89,499	1,934,692	21.5
64-65	0.009461	89,109	843	88,687	1,845,193	20.7

Table 6. Life table for white females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table06.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.010385	88,266	917	87,808	1,756,505	19.9
66-67	0.011333	87,349	990	86,854	1,668,698	19.1
67-68	0.012371	86,359	1,068	85,825	1,581,843	18.3
68-69	0.013479	85,291	1,150	84,716	1,496,018	17.5
69-70	0.014707	84,141	1,237	83,523	1,411,302	16.8
70-71	0.016126	82,904	1,337	82,236	1,327,779	16.0
71-72	0.017814	81,567	1,453	80,841	1,245,544	15.3
72-73	0.019795	80,114	1,586	79,321	1,164,703	14.5
73-74	0.022083	78,528	1,734	77,661	1,085,382	13.8
74-75	0.024685	76,794	1,896	75,846	1,007,721	13.1
75-76	0.027635	74,898	2,070	73,863	931,875	12.4
76-77	0.030846	72,829	2,246	71,705	858,011	11.8
77-78	0.034418	70,582	2,429	69,367	786,306	11.1
78-79	0.038388	68,153	2,616	66,845	716,938	10.5
79-80	0.042794	65,537	2,805	64,134	650,094	9.9
80-81	0.047681	62,732	2,991	61,236	585,959	9.3
81-82	0.053096	59,741	3,172	58,155	524,723	8.8
82-83	0.059087	56,569	3,342	54,898	466,568	8.2
83-84	0.065708	53,226	3,497	51,478	411,671	7.7
84-85	0.073012	49,729	3,631	47,914	360,193	7.2
85-86	0.081059	46,098	3,737	44,230	312,279	6.8
86-87	0.089906	42,361	3,809	40,457	268,050	6.3
87-88	0.099613	38,553	3,840	36,633	227,592	5.9
88-89	0.110243	34,713	3,827	32,799	190,960	5.5
89-90	0.121852	30,886	3,764	29,004	158,161	5.1
90-91	0.134500	27,122	3,648	25,298	129,157	4.8
91-92	0.148239	23,474	3,480	21,734	103,858	4.4
92-93	0.163117	19,995	3,261	18,364	82,124	4.1
93-94	0.179173	16,733	2,998	15,234	63,760	3.8
94-95	0.196440	13,735	2,698	12,386	48,526	3.5
95-96	0.214934	11,037	2,372	9,851	36,140	3.3
96-97	0.234662	8,665	2,033	7,648	26,289	3.0
97-98	0.255610	6,631	1,695	5,784	18,641	2.8
98-99	0.277750	4,936	1,371	4,251	12,857	2.6
99-100	0.301032	3,565	1,073	3,029	8,607	2.4
100 and over	1.000000	2,492	2,492	5,578	5,578	2.2

Table 7. Life table for the black population: United States, 2007

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table07.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.013261	100,000	1,326	98,830	7,356,870	73.6
1-2	0.000663	98,674	65	98,641	7,258,040	73.6
2-3	0.000435	98,608	43	98,587	7,159,399	72.6
3-4	0.000323	98,566	32	98,550	7,060,812	71.6
4-5	0.000260	98,534	26	98,521	6,962,262	70.7
5-6	0.000226	98,508	22	98,497	6,863,741	69.7
6-7	0.000201	98,486	20	98,476	6,765,244	68.7
7-8	0.000180	98,466	18	98,457	6,666,768	67.7
8-9	0.000158	98,448	16	98,441	6,568,311	66.7
9-10	0.000136	98,433	13	98,426	6,469,870	65.7
10-11	0.000122	98,419	12	98,413	6,371,444	64.7
11-12	0.000134	98,407	13	98,401	6,273,031	63.7
12-13	0.000188	98,394	18	98,385	6,174,630	62.8
13-14	0.000293	98,376	29	98,361	6,076,245	61.8
14-15	0.000432	98,347	42	98,326	5,977,884	60.8
15-16	0.000579	98,304	57	98,276	5,879,558	59.8
16-17	0.000716	98,247	70	98,212	5,781,282	58.8
17-18	0.000843	98,177	83	98,136	5,683,070	57.9
18-19	0.000961	98,094	94	98,047	5,584,934	56.9
19-20	0.001073	98,000	105	97,948	5,486,887	56.0
20-21	0.001196	97,895	117	97,837	5,388,939	55.0
21-22	0.001322	97,778	129	97,713	5,291,103	54.1
22-23	0.001421	97,649	139	97,579	5,193,389	53.2
23-24	0.001476	97,510	144	97,438	5,095,810	52.3
24-25	0.001496	97,366	146	97,293	4,998,372	51.3
25-26	0.001505	97,221	146	97,147	4,901,079	50.4
26-27	0.001521	97,074	148	97,000	4,803,931	49.5
27-28	0.001543	96,927	150	96,852	4,706,931	48.6
28-29	0.001577	96,777	153	96,701	4,610,079	47.6
29-30	0.001626	96,624	157	96,546	4,513,379	46.7
30-31	0.001684	96,467	162	96,386	4,416,833	45.8
31-32	0.001752	96,305	169	96,220	4,320,447	44.9
32-33	0.001848	96,136	178	96,047	4,224,226	43.9
33-34	0.001925	95,958	185	95,866	4,128,179	43.0
34-35	0.002027	95,774	194	95,677	4,032,313	42.1
35-36	0.002140	95,580	204	95,477	3,936,636	41.2
36-37	0.002268	95,375	216	95,267	3,841,159	40.3
37-38	0.002412	95,159	230	95,044	3,745,892	39.4
38-39	0.002578	94,929	245	94,807	3,650,848	38.5
39-40	0.002769	94,685	262	94,553	3,556,041	37.6
40-41	0.002976	94,422	281	94,282	3,461,488	36.7
41-42	0.003205	94,141	302	93,991	3,367,206	35.8
42-43	0.003480	93,840	327	93,676	3,273,215	34.9
43-44	0.003808	93,513	356	93,335	3,179,539	34.0
44-45	0.004180	93,157	389	92,962	3,086,204	33.1
45-46	0.004564	92,768	423	92,556	2,993,242	32.3
46-47	0.004964	92,344	458	92,115	2,900,686	31.4
47-48	0.005421	91,886	498	91,637	2,808,571	30.6
48-49	0.005958	91,388	544	91,115	2,716,934	29.7
49-50	0.006569	90,843	597	90,545	2,625,818	28.9
50-51	0.007242	90,247	654	89,920	2,535,274	28.1
51-52	0.007943	89,593	712	89,237	2,445,354	27.3
52-53	0.008646	88,881	768	88,497	2,356,117	26.5
53-54	0.009319	88,113	821	87,702	2,267,620	25.7
54-55	0.009967	87,292	870	86,857	2,179,917	25.0
55-56	0.010650	86,422	920	85,961	2,093,061	24.2
56-57	0.011385	85,501	973	85,015	2,007,099	23.5
57-58	0.012136	84,528	1,026	84,015	1,922,085	22.7
58-59	0.012920	83,502	1,079	82,963	1,838,070	22.0
59-60	0.013768	82,423	1,135	81,856	1,755,107	21.3
60-61	0.014730	81,288	1,197	80,690	1,673,251	20.6
61-62	0.015822	80,091	1,267	79,457	1,592,561	19.9
62-63	0.017011	78,824	1,341	78,153	1,513,104	19.2
63-64	0.018233	77,483	1,413	76,777	1,434,951	18.5
64-65	0.019460	76,070	1,480	75,330	1,358,174	17.9

Table 7. Life table for the black population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table07.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.020737	74,590	1,547	73,816	1,282,844	17.2
66-67	0.021982	73,043	1,606	72,240	1,209,027	16.6
67-68	0.023371	71,437	1,670	70,603	1,136,787	15.9
68-69	0.024936	69,768	1,740	68,898	1,066,184	15.3
69-70	0.026691	68,028	1,816	67,120	997,286	14.7
70-71	0.028620	66,212	1,895	65,265	930,166	14.0
71-72	0.030788	64,317	1,980	63,327	864,901	13.4
72-73	0.033295	62,337	2,076	61,299	801,574	12.9
73-74	0.036164	60,262	2,179	59,172	740,274	12.3
74-75	0.039361	58,082	2,286	56,939	681,102	11.7
75-76	0.042850	55,796	2,391	54,601	624,163	11.2
76-77	0.046413	53,405	2,479	52,166	569,562	10.7
77-78	0.050257	50,927	2,559	49,647	517,396	10.2
78-79	0.054400	48,367	2,631	47,052	467,749	9.7
79-80	0.058865	45,736	2,692	44,390	420,697	9.2
80-81	0.063670	43,044	2,741	41,674	376,308	8.7
81-82	0.068840	40,303	2,774	38,916	334,634	8.3
82-83	0.074396	37,529	2,792	36,133	295,718	7.9
83-84	0.080361	34,737	2,791	33,341	259,585	7.5
84-85	0.086760	31,945	2,772	30,560	226,244	7.1
85-86	0.093617	29,174	2,731	27,808	195,685	6.7
86-87	0.100955	26,443	2,670	25,108	167,877	6.3
87-88	0.108800	23,773	2,587	22,480	142,769	6.0
88-89	0.117175	21,187	2,483	19,945	120,289	5.7
89-90	0.126103	18,704	2,359	17,525	100,344	5.4
90-91	0.135608	16,345	2,217	15,237	82,819	5.1
91-92	0.145709	14,129	2,059	13,099	67,582	4.8
92-93	0.156426	12,070	1,888	11,126	54,482	4.5
93-94	0.167777	10,182	1,708	9,328	43,356	4.3
94-95	0.179776	8,474	1,523	7,712	34,028	4.0
95-96	0.192435	6,950	1,337	6,282	26,316	3.8
96-97	0.205761	5,613	1,155	5,035	20,035	3.6
97-98	0.219759	4,458	980	3,968	14,999	3.4
98-99	0.234429	3,478	815	3,071	11,031	3.2
99-100	0.249764	2,663	665	2,330	7,961	3.0
100 and over	1.000000	1,998	1,998	5,630	5,630	2.8

Table 8. Life table for black males: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table08.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.014513	100,000	1,451	98,723	7,002,966	70.0
1-2	0.000702	98,549	69	98,514	6,904,243	70.1
2-3	0.000464	98,480	46	98,457	6,805,729	69.1
3-4	0.000359	98,434	35	98,416	6,707,272	68.1
4-5	0.000280	98,398	28	98,385	6,608,856	67.2
5-6	0.000250	98,371	25	98,359	6,510,471	66.2
6-7	0.000232	98,346	23	98,335	6,412,113	65.2
7-8	0.000214	98,323	21	98,313	6,313,778	64.2
8-9	0.000182	98,302	18	98,294	6,215,465	63.2
9-10	0.000141	98,285	14	98,278	6,117,171	62.2
10-11	0.000109	98,271	11	98,265	6,018,894	61.2
11-12	0.000117	98,260	11	98,254	5,920,628	60.3
12-13	0.000200	98,249	20	98,239	5,822,374	59.3
13-14	0.000376	98,229	37	98,210	5,724,135	58.3
14-15	0.000612	98,192	60	98,162	5,625,925	57.3
15-16	0.000862	98,132	85	98,090	5,527,763	56.3
16-17	0.001090	98,047	107	97,994	5,429,673	55.4
17-18	0.001301	97,940	127	97,877	5,331,680	54.4
18-19	0.001490	97,813	146	97,740	5,233,803	53.5
19-20	0.001666	97,667	163	97,586	5,136,063	52.6
20-21	0.001857	97,505	181	97,414	5,038,477	51.7
21-22	0.002050	97,324	200	97,224	4,941,063	50.8
22-23	0.002194	97,124	213	97,017	4,843,839	49.9
23-24	0.002261	96,911	219	96,801	4,746,822	49.0
24-25	0.002267	96,692	219	96,582	4,650,020	48.1
25-26	0.002250	96,473	217	96,364	4,553,438	47.2
26-27	0.002243	96,255	216	96,148	4,457,074	46.3
27-28	0.002247	96,040	216	95,932	4,360,926	45.4
28-29	0.002277	95,824	218	95,715	4,264,995	44.5
29-30	0.002333	95,606	223	95,494	4,169,280	43.6
30-31	0.002401	95,383	229	95,268	4,073,786	42.7
31-32	0.002473	95,154	235	95,036	3,978,518	41.8
32-33	0.002591	94,918	246	94,795	3,883,482	40.9
33-34	0.002637	94,672	250	94,548	3,788,686	40.0
34-35	0.002724	94,423	257	94,294	3,694,139	39.1
35-36	0.002823	94,166	266	94,033	3,599,845	38.2
36-37	0.002945	93,900	277	93,762	3,505,812	37.3
37-38	0.003095	93,623	290	93,478	3,412,051	36.4
38-39	0.003282	93,334	306	93,180	3,318,572	35.6
39-40	0.003508	93,027	326	92,864	3,225,392	34.7
40-41	0.003760	92,701	349	92,527	3,132,528	33.8
41-42	0.004041	92,352	373	92,166	3,040,001	32.9
42-43	0.004368	91,979	402	91,778	2,947,835	32.0
43-44	0.004748	91,577	435	91,360	2,856,057	31.2
44-45	0.005174	91,143	472	90,907	2,764,697	30.3
45-46	0.005613	90,671	509	90,417	2,673,790	29.5
46-47	0.006085	90,162	549	89,888	2,583,374	28.7
47-48	0.006658	89,613	597	89,315	2,493,486	27.8
48-49	0.007371	89,017	656	88,689	2,404,171	27.0
49-50	0.008214	88,361	726	87,998	2,315,482	26.2
50-51	0.009152	87,635	802	87,234	2,227,484	25.4
51-52	0.010128	86,833	879	86,393	2,140,250	24.6
52-53	0.011119	85,953	956	85,476	2,053,857	23.9
53-54	0.012078	84,998	1,027	84,484	1,968,381	23.2
54-55	0.013010	83,971	1,092	83,425	1,883,897	22.4
55-56	0.014000	82,879	1,160	82,299	1,800,472	21.7
56-57	0.015061	81,718	1,231	81,103	1,718,174	21.0
57-58	0.016121	80,488	1,298	79,839	1,637,070	20.3
58-59	0.017184	79,190	1,361	78,510	1,557,232	19.7
59-60	0.018296	77,829	1,424	77,117	1,478,722	19.0
60-61	0.019540	76,405	1,493	75,659	1,401,605	18.3
61-62	0.020953	74,912	1,570	74,128	1,325,946	17.7
62-63	0.022478	73,343	1,649	72,519	1,251,818	17.1
63-64	0.024035	71,694	1,723	70,833	1,179,300	16.4
64-65	0.025584	69,971	1,790	69,076	1,108,467	15.8

Table 8. Life table for black males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table08.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.027173	68,181	1,853	67,255	1,039,391	15.2
66-67	0.028813	66,328	1,911	65,373	972,136	14.7
67-68	0.030640	64,417	1,974	63,430	906,764	14.1
68-69	0.032690	62,443	2,041	61,423	843,334	13.5
69-70	0.034968	60,402	2,112	59,346	781,911	12.9
70-71	0.037427	58,290	2,182	57,199	722,565	12.4
71-72	0.040151	56,108	2,253	54,982	665,366	11.9
72-73	0.043278	53,856	2,331	52,690	610,384	11.3
73-74	0.046835	51,525	2,413	50,318	557,694	10.8
74-75	0.050750	49,112	2,492	47,865	507,375	10.3
75-76	0.054941	46,619	2,561	45,339	459,510	9.9
76-77	0.059114	44,058	2,604	42,756	414,171	9.4
77-78	0.063582	41,453	2,636	40,136	371,416	9.0
78-79	0.068363	38,818	2,654	37,491	331,280	8.5
79-80	0.073476	36,164	2,657	34,835	293,789	8.1
80-81	0.078938	33,507	2,645	32,184	258,954	7.7
81-82	0.084770	30,862	2,616	29,554	226,769	7.3
82-83	0.090990	28,246	2,570	26,961	197,215	7.0
83-84	0.097617	25,676	2,506	24,422	170,255	6.6
84-85	0.104672	23,169	2,425	21,957	145,832	6.3
85-86	0.112173	20,744	2,327	19,581	123,876	6.0
86-87	0.120139	18,417	2,213	17,311	104,295	5.7
87-88	0.128590	16,205	2,084	15,163	86,984	5.4
88-89	0.137541	14,121	1,942	13,150	71,821	5.1
89-90	0.147011	12,179	1,790	11,283	58,672	4.8
90-91	0.157014	10,388	1,631	9,573	47,388	4.6
91-92	0.167564	8,757	1,467	8,023	37,815	4.3
92-93	0.178673	7,290	1,302	6,639	29,792	4.1
93-94	0.190350	5,987	1,140	5,417	23,153	3.9
94-95	0.202601	4,848	982	4,357	17,736	3.7
95-96	0.215432	3,865	833	3,449	13,380	3.5
96-97	0.228841	3,033	694	2,686	9,930	3.3
97-98	0.242827	2,339	568	2,055	7,245	3.1
98-99	0.257383	1,771	456	1,543	5,190	2.9
99-100	0.272497	1,315	358	1,136	3,647	2.8
100 and over	1.000000	957	957	2,511	2,511	2.6

Table 9. Life table for black females: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table09.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.011966	100,000	1,197	98,942	7,682,875	76.8
1-2	0.000623	98,803	62	98,773	7,583,933	76.8
2-3	0.000405	98,742	40	98,722	7,485,161	75.8
3-4	0.000285	98,702	28	98,688	7,386,439	74.8
4-5	0.000239	98,674	24	98,662	7,287,751	73.9
5-6	0.000202	98,650	20	98,640	7,189,089	72.9
6-7	0.000168	98,630	17	98,622	7,090,449	71.9
7-8	0.000146	98,614	14	98,606	6,991,827	70.9
8-9	0.000134	98,599	13	98,593	6,893,221	69.9
9-10	0.000131	98,586	13	98,580	6,794,628	68.9
10-11	0.000136	98,573	13	98,566	6,696,049	67.9
11-12	0.000151	98,560	15	98,552	6,597,482	66.9
12-13	0.000175	98,545	17	98,536	6,498,930	65.9
13-14	0.000207	98,528	20	98,517	6,400,394	65.0
14-15	0.000246	98,507	24	98,495	6,301,877	64.0
15-16	0.000288	98,483	28	98,469	6,203,382	63.0
16-17	0.000331	98,455	33	98,438	6,104,913	62.0
17-18	0.000374	98,422	37	98,404	6,006,475	61.0
18-19	0.000417	98,385	41	98,365	5,908,071	60.1
19-20	0.000461	98,344	45	98,321	5,809,707	59.1
20-21	0.000511	98,299	50	98,274	5,711,385	58.1
21-22	0.000566	98,248	56	98,221	5,613,112	57.1
22-23	0.000621	98,193	61	98,162	5,514,891	56.2
23-24	0.000672	98,132	66	98,099	5,416,729	55.2
24-25	0.000718	98,066	70	98,031	5,318,630	54.2
25-26	0.000766	97,996	75	97,958	5,220,599	53.3
26-27	0.000818	97,920	80	97,880	5,122,641	52.3
27-28	0.000866	97,840	85	97,798	5,024,761	51.4
28-29	0.000913	97,756	89	97,711	4,926,963	50.4
29-30	0.000963	97,666	94	97,619	4,829,252	49.4
30-31	0.001020	97,572	100	97,523	4,731,632	48.5
31-32	0.001091	97,473	106	97,420	4,634,110	47.5
32-33	0.001183	97,366	115	97,309	4,536,690	46.6
33-34	0.001285	97,251	125	97,189	4,439,381	45.6
34-35	0.001401	97,126	136	97,058	4,342,192	44.7
35-36	0.001527	96,990	148	96,916	4,245,134	43.8
36-37	0.001661	96,842	161	96,762	4,148,218	42.8
37-38	0.001801	96,681	174	96,594	4,051,456	41.9
38-39	0.001950	96,507	188	96,413	3,954,862	41.0
39-40	0.002112	96,319	203	96,217	3,858,449	40.1
40-41	0.002280	96,116	219	96,006	3,762,232	39.1
41-42	0.002466	95,896	236	95,778	3,666,226	38.2
42-43	0.002697	95,660	258	95,531	3,570,447	37.3
43-44	0.002981	95,402	284	95,260	3,474,916	36.4
44-45	0.003307	95,118	315	94,960	3,379,657	35.5
45-46	0.003644	94,803	345	94,630	3,284,696	34.6
46-47	0.003984	94,458	376	94,269	3,190,066	33.8
47-48	0.004344	94,081	409	93,877	3,095,797	32.9
48-49	0.004731	93,673	443	93,451	3,001,920	32.0
49-50	0.005147	93,229	480	92,989	2,908,469	31.2
50-51	0.005601	92,750	520	92,490	2,815,479	30.4
51-52	0.006076	92,230	560	91,950	2,722,990	29.5
52-53	0.006546	91,670	600	91,370	2,631,040	28.7
53-54	0.006988	91,070	636	90,751	2,539,670	27.9
54-55	0.007412	90,433	670	90,098	2,448,919	27.1
55-56	0.007854	89,763	705	89,410	2,358,821	26.3
56-57	0.008337	89,058	742	88,687	2,269,411	25.5
57-58	0.008856	88,315	782	87,924	2,180,724	24.7
58-59	0.009435	87,533	826	87,120	2,092,799	23.9
59-60	0.010097	86,707	875	86,270	2,005,679	23.1
60-61	0.010865	85,832	933	85,366	1,919,409	22.4
61-62	0.011741	84,899	997	84,401	1,834,044	21.6
62-63	0.012711	83,903	1,066	83,369	1,749,643	20.9
63-64	0.013723	82,836	1,137	82,268	1,666,273	20.1
64-65	0.014757	81,699	1,206	81,097	1,584,006	19.4

Table 9. Life table for black females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table09.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.015857	80,494	1,276	79,856	1,502,909	18.7
66-67	0.016938	79,217	1,342	78,546	1,423,054	18.0
67-68	0.018133	77,876	1,412	77,170	1,344,507	17.3
68-69	0.019463	76,463	1,488	75,719	1,267,338	16.6
69-70	0.020958	74,975	1,571	74,190	1,191,618	15.9
70-71	0.022622	73,404	1,661	72,574	1,117,429	15.2
71-72	0.024515	71,743	1,759	70,864	1,044,855	14.6
72-73	0.026714	69,985	1,870	69,050	973,991	13.9
73-74	0.029242	68,115	1,992	67,119	904,941	13.3
74-75	0.032077	66,123	2,121	65,063	837,822	12.7
75-76	0.035204	64,002	2,253	62,876	772,759	12.1
76-77	0.038445	61,749	2,374	60,562	709,884	11.5
77-78	0.041971	59,375	2,492	58,129	649,322	10.9
78-79	0.045806	56,883	2,606	55,580	591,193	10.4
79-80	0.049972	54,278	2,712	52,921	535,612	9.9
80-81	0.054496	51,565	2,810	50,160	482,691	9.4
81-82	0.059404	48,755	2,896	47,307	432,531	8.9
82-83	0.064723	45,859	2,968	44,375	385,224	8.4
83-84	0.070483	42,891	3,023	41,379	340,849	7.9
84-85	0.076714	39,868	3,058	38,338	299,470	7.5
85-86	0.083446	36,809	3,072	35,273	261,131	7.1
86-87	0.090711	33,738	3,060	32,207	225,858	6.7
87-88	0.098541	30,677	3,023	29,166	193,650	6.3
88-89	0.106966	27,654	2,958	26,175	164,485	5.9
89-90	0.116019	24,696	2,865	23,264	138,309	5.6
90-91	0.125731	21,831	2,745	20,459	115,046	5.3
91-92	0.136131	19,086	2,598	17,787	94,587	5.0
92-93	0.147245	16,488	2,428	15,274	76,800	4.7
93-94	0.159100	14,060	2,237	12,942	61,526	4.4
94-95	0.171718	11,823	2,030	10,808	48,584	4.1
95-96	0.185115	9,793	1,813	8,887	37,776	3.9
96-97	0.199307	7,980	1,590	7,185	28,890	3.6
97-98	0.214300	6,390	1,369	5,705	21,705	3.4
98-99	0.230097	5,020	1,155	4,443	16,000	3.2
99-100	0.246693	3,865	954	3,388	11,557	3.0
100 and over	1.000000	2,912	2,912	8,169	8,169	2.8

Table 10. Life table for the Hispanic population: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table10.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005524	100,000	552	99,513	8,090,516	80.9
1-2	0.000440	99,448	44	99,426	7,991,003	80.4
2-3	0.000239	99,404	24	99,392	7,891,577	79.4
3-4	0.000195	99,380	19	99,371	7,792,185	78.4
4-5	0.000157	99,361	16	99,353	7,692,815	77.4
5-6	0.000157	99,345	16	99,337	7,593,462	76.4
6-7	0.000147	99,330	15	99,322	7,494,124	75.4
7-8	0.000137	99,315	14	99,308	7,394,802	74.5
8-9	0.000123	99,301	12	99,295	7,295,494	73.5
9-10	0.000105	99,289	10	99,284	7,196,198	72.5
10-11	0.000091	99,279	9	99,274	7,096,914	71.5
11-12	0.000091	99,270	9	99,265	6,997,640	70.5
12-13	0.000118	99,261	12	99,255	6,898,375	69.5
13-14	0.000180	99,249	18	99,240	6,799,120	68.5
14-15	0.000269	99,231	27	99,218	6,699,880	67.5
15-16	0.000369	99,204	37	99,186	6,600,662	66.5
16-17	0.000467	99,168	46	99,145	6,501,476	65.6
17-18	0.000565	99,122	56	99,094	6,402,331	64.6
18-19	0.000658	99,066	65	99,033	6,303,237	63.6
19-20	0.000744	99,000	74	98,964	6,204,204	62.7
20-21	0.000836	98,927	83	98,885	6,105,241	61.7
21-22	0.000920	98,844	91	98,799	6,006,355	60.8
22-23	0.000966	98,753	95	98,705	5,907,557	59.8
23-24	0.000959	98,658	95	98,610	5,808,851	58.9
24-25	0.000916	98,563	90	98,518	5,710,241	57.9
25-26	0.000865	98,473	85	98,430	5,611,723	57.0
26-27	0.000824	98,388	81	98,347	5,513,293	56.0
27-28	0.000794	98,307	78	98,268	5,414,946	55.1
28-29	0.000782	98,229	77	98,190	5,316,678	54.1
29-30	0.000782	98,152	77	98,113	5,218,488	53.2
30-31	0.000785	98,075	77	98,036	5,120,374	52.2
31-32	0.000790	97,998	77	97,959	5,022,338	51.2
32-33	0.000795	97,921	78	97,882	4,924,379	50.3
33-34	0.000845	97,843	83	97,801	4,826,497	49.3
34-35	0.000898	97,760	88	97,716	4,728,695	48.4
35-36	0.000962	97,672	94	97,625	4,630,979	47.4
36-37	0.001033	97,578	101	97,528	4,533,354	46.5
37-38	0.001113	97,478	108	97,423	4,435,826	45.5
38-39	0.001200	97,369	117	97,311	4,338,403	44.6
39-40	0.001296	97,252	126	97,189	4,241,092	43.6
40-41	0.001402	97,126	136	97,058	4,143,903	42.7
41-42	0.001521	96,990	147	96,916	4,046,845	41.7
42-43	0.001654	96,842	160	96,762	3,949,929	40.8
43-44	0.001805	96,682	175	96,595	3,853,166	39.9
44-45	0.001973	96,508	190	96,413	3,756,571	38.9
45-46	0.002153	96,317	207	96,214	3,660,159	38.0
46-47	0.002348	96,110	226	95,997	3,563,945	37.1
47-48	0.002564	95,884	246	95,761	3,467,948	36.2
48-49	0.002806	95,638	268	95,504	3,372,187	35.3
49-50	0.003075	95,370	293	95,223	3,276,682	34.4
50-51	0.003379	95,077	321	94,916	3,181,459	33.5
51-52	0.003702	94,756	351	94,580	3,086,543	32.6
52-53	0.004019	94,405	379	94,215	2,991,963	31.7
53-54	0.004308	94,025	405	93,823	2,897,747	30.8
54-55	0.004576	93,620	428	93,406	2,803,925	29.9
55-56	0.004853	93,192	452	92,966	2,710,519	29.1
56-57	0.005165	92,740	479	92,500	2,617,553	28.2
57-58	0.005515	92,261	509	92,006	2,525,053	27.4
58-59	0.005920	91,752	543	91,480	2,433,047	26.5
59-60	0.006388	91,209	583	90,917	2,341,566	25.7
60-61	0.006909	90,626	626	90,313	2,250,649	24.8
61-62	0.007488	90,000	674	89,663	2,160,336	24.0
62-63	0.008157	89,326	729	88,962	2,070,673	23.2
63-64	0.008929	88,597	791	88,202	1,981,712	22.4
64-65	0.009801	87,806	861	87,376	1,893,510	21.6

Table 10. Life table for the Hispanic population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table10.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.010793	86,946	938	86,476	1,806,134	20.8
66-67	0.011886	86,007	1,022	85,496	1,719,657	20.0
67-68	0.013018	84,985	1,106	84,432	1,634,161	19.2
68-69	0.014138	83,879	1,186	83,286	1,549,729	18.5
69-70	0.015261	82,693	1,262	82,062	1,466,444	17.7
70-71	0.016394	81,431	1,335	80,763	1,384,382	17.0
71-72	0.017649	80,096	1,414	79,389	1,303,619	16.3
72-73	0.019151	78,682	1,507	77,929	1,224,230	15.6
73-74	0.021011	77,175	1,621	76,365	1,146,301	14.9
74-75	0.023194	75,554	1,752	74,678	1,069,936	14.2
75-76	0.025495	73,802	1,882	72,861	995,258	13.5
76-77	0.027970	71,920	2,012	70,914	922,398	12.8
77-78	0.030842	69,908	2,156	68,830	851,483	12.2
78-79	0.034188	67,752	2,316	66,594	782,653	11.6
79-80	0.037989	65,436	2,486	64,193	716,059	10.9
80-81	0.042224	62,950	2,658	61,621	651,866	10.4
81-82	0.046885	60,292	2,827	58,879	590,245	9.8
82-83	0.051711	57,465	2,972	55,979	531,366	9.2
83-84	0.057005	54,494	3,106	52,940	475,387	8.7
84-85	0.062804	51,387	3,227	49,774	422,446	8.2
85-86	0.069149	48,160	3,330	46,495	372,673	7.7
86-87	0.076084	44,830	3,411	43,124	326,178	7.3
87-88	0.083652	41,419	3,465	39,687	283,053	6.8
88-89	0.091897	37,954	3,488	36,210	243,367	6.4
89-90	0.100866	34,466	3,476	32,728	207,157	6.0
90-91	0.110604	30,990	3,428	29,276	174,429	5.6
91-92	0.121155	27,562	3,339	25,893	145,153	5.3
92-93	0.132563	24,223	3,211	22,617	119,260	4.9
93-94	0.144867	21,012	3,044	19,490	96,643	4.6
94-95	0.158106	17,968	2,841	16,547	77,153	4.3
95-96	0.172311	15,127	2,607	13,824	60,605	4.0
96-97	0.187507	12,521	2,348	11,347	46,782	3.7
97-98	0.203714	10,173	2,072	9,137	35,435	3.5
98-99	0.220941	8,100	1,790	7,206	26,298	3.2
99-100	0.239187	6,311	1,509	5,556	19,093	3.0
100 and over	1.00000	4,801	4,801	13,537	13,537	2.8

Table 11. Life table for Hispanic males: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table11.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005969	100,000	597	99,474	7,823,786	78.2
1-2	0.000440	99,403	44	99,381	7,724,312	77.7
2-3	0.000275	99,359	27	99,346	7,624,931	76.7
3-4	0.000221	99,332	22	99,321	7,525,585	75.8
4-5	0.000176	99,310	17	99,301	7,426,264	74.8
5-6	0.000175	99,293	17	99,284	7,326,963	73.8
6-7	0.000165	99,275	16	99,267	7,227,679	72.8
7-8	0.000152	99,259	15	99,251	7,128,412	71.8
8-9	0.000131	99,244	13	99,237	7,029,161	70.8
9-10	0.000102	99,231	10	99,226	6,929,923	69.8
10-11	0.000078	99,221	8	99,217	6,830,698	68.8
11-12	0.000077	99,213	8	99,209	6,731,481	67.8
12-13	0.000120	99,205	12	99,199	6,632,272	66.9
13-14	0.000222	99,193	22	99,182	6,533,072	65.9
14-15	0.000371	99,171	37	99,153	6,433,890	64.9
15-16	0.000537	99,135	53	99,108	6,334,737	63.9
16-17	0.000698	99,081	69	99,047	6,235,629	62.9
17-18	0.000858	99,012	85	98,970	6,136,582	62.0
18-19	0.001009	98,927	100	98,877	6,037,612	61.0
19-20	0.001144	98,827	113	98,771	5,938,735	60.1
20-21	0.001286	98,714	127	98,651	5,839,964	59.2
21-22	0.001413	98,587	139	98,518	5,741,313	58.2
22-23	0.001472	98,448	145	98,376	5,642,795	57.3
23-24	0.001446	98,303	142	98,232	5,544,419	56.4
24-25	0.001365	98,161	134	98,094	5,446,187	55.5
25-26	0.001271	98,027	125	97,965	5,348,093	54.6
26-27	0.001195	97,903	117	97,844	5,250,128	53.6
27-28	0.001141	97,786	112	97,730	5,152,284	52.7
28-29	0.001117	97,674	109	97,619	5,054,554	51.7
29-30	0.001116	97,565	109	97,510	4,956,935	50.8
30-31	0.001119	97,456	109	97,402	4,859,424	49.9
31-32	0.001121	97,347	109	97,292	4,762,023	48.9
32-33	0.001112	97,238	108	97,184	4,664,730	48.0
33-34	0.001171	97,130	114	97,073	4,567,547	47.0
34-35	0.001220	97,016	118	96,957	4,470,474	46.1
35-36	0.001281	96,898	124	96,836	4,373,517	45.1
36-37	0.001353	96,774	131	96,708	4,276,681	44.2
37-38	0.001446	96,643	140	96,573	4,179,973	43.3
38-39	0.001563	96,503	151	96,427	4,083,400	42.3
39-40	0.001702	96,352	164	96,270	3,986,973	41.4
40-41	0.001860	96,188	179	96,099	3,890,703	40.4
41-42	0.002030	96,009	195	95,912	3,794,604	39.5
42-43	0.002208	95,814	212	95,709	3,698,692	38.6
43-44	0.002390	95,603	228	95,489	3,602,984	37.7
44-45	0.002579	95,374	246	95,251	3,507,495	36.8
45-46	0.002780	95,128	264	94,996	3,412,244	35.9
46-47	0.003002	94,864	285	94,721	3,317,248	35.0
47-48	0.003259	94,579	308	94,425	3,222,527	34.1
48-49	0.003561	94,271	336	94,103	3,128,102	33.2
49-50	0.003907	93,935	367	93,752	3,033,999	32.3
50-51	0.004301	93,568	402	93,367	2,940,247	31.4
51-52	0.004722	93,166	440	92,946	2,846,880	30.6
52-53	0.005138	92,726	476	92,488	2,753,934	29.7
53-54	0.005521	92,249	509	91,995	2,661,446	28.9
54-55	0.005879	91,740	539	91,471	2,569,452	28.0
55-56	0.006248	91,201	570	90,916	2,477,981	27.2
56-57	0.006664	90,631	604	90,329	2,387,065	26.3
57-58	0.007126	90,027	642	89,706	2,296,736	25.5
58-59	0.007657	89,386	684	89,043	2,207,030	24.7
59-60	0.008267	88,701	733	88,335	2,117,986	23.9
60-61	0.008943	87,968	787	87,575	2,029,652	23.1
61-62	0.009691	87,181	845	86,759	1,942,077	22.3
62-63	0.010551	86,336	911	85,881	1,855,319	21.5
63-64	0.011537	85,425	986	84,933	1,769,438	20.7
64-65	0.012642	84,440	1,067	83,906	1,684,505	19.9

Table 11. Life table for Hispanic males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table11.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.013886	83,372	1,158	82,793	1,600,599	19.2
66-67	0.015242	82,215	1,253	81,588	1,517,806	18.5
67-68	0.016629	80,961	1,346	80,288	1,436,218	17.7
68-69	0.017982	79,615	1,432	78,899	1,355,929	17.0
69-70	0.019317	78,183	1,510	77,428	1,277,030	16.3
70-71	0.020643	76,673	1,583	75,882	1,199,602	15.6
71-72	0.022088	75,090	1,659	74,261	1,123,720	15.0
72-73	0.023806	73,432	1,748	72,558	1,049,459	14.3
73-74	0.025933	71,684	1,859	70,754	976,901	13.6
74-75	0.028427	69,825	1,985	68,832	906,147	13.0
75-76	0.031059	67,840	2,107	66,786	837,314	12.3
76-77	0.033938	65,733	2,231	64,617	770,528	11.7
77-78	0.037269	63,502	2,367	62,319	705,911	11.1
78-79	0.041154	61,135	2,516	59,877	643,592	10.5
79-80	0.045622	58,619	2,674	57,282	583,715	10.0
80-81	0.050690	55,945	2,836	54,527	526,432	9.4
81-82	0.056362	53,109	2,993	51,612	471,905	8.9
82-83	0.061913	50,116	3,103	48,564	420,293	8.4
83-84	0.067970	47,013	3,195	45,415	371,728	7.9
84-85	0.074574	43,818	3,268	42,184	326,313	7.4
85-86	0.081762	40,550	3,315	38,892	284,129	7.0
86-87	0.089576	37,234	3,335	35,567	245,237	6.6
87-88	0.098058	33,899	3,324	32,237	209,670	6.2
88-89	0.107248	30,575	3,279	28,936	177,433	5.8
89-90	0.117187	27,296	3,199	25,697	148,498	5.4
90-91	0.127915	24,097	3,082	22,556	122,801	5.1
91-92	0.139470	21,015	2,931	19,549	100,245	4.8
92-93	0.151888	18,084	2,747	16,711	80,696	4.5
93-94	0.165199	15,337	2,534	14,070	63,985	4.2
94-95	0.179429	12,803	2,297	11,655	49,915	3.9
95-96	0.194600	10,506	2,044	9,484	38,260	3.6
96-97	0.210723	8,462	1,783	7,570	28,776	3.4
97-98	0.227805	6,679	1,521	5,918	21,206	3.2
98-99	0.245841	5,157	1,268	4,523	15,288	3.0
99-100	0.264814	3,889	1,030	3,374	10,765	2.8
100 and over	1.00000	2,859	2,859	7,390	7,390	2.6

Table 12. Life table for Hispanic females: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table12.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005060	100,000	506	99,554	8,337,374	83.4
1-2	0.000439	99,494	44	99,472	8,237,820	82.8
2-3	0.000200	99,450	20	99,440	8,138,348	81.8
3-4	0.000167	99,430	17	99,422	8,038,908	80.8
4-5	0.000137	99,414	14	99,407	7,939,486	79.9
5-6	0.000138	99,400	14	99,393	7,840,079	78.9
6-7	0.000129	99,386	13	99,380	7,740,686	77.9
7-8	0.000121	99,374	12	99,368	7,641,306	76.9
8-9	0.000114	99,362	11	99,356	7,541,938	75.9
9-10	0.000108	99,350	11	99,345	7,442,582	74.9
10-11	0.000105	99,340	10	99,334	7,343,237	73.9
11-12	0.000107	99,329	11	99,324	7,243,902	72.9
12-13	0.000116	99,319	12	99,313	7,144,579	71.9
13-14	0.000136	99,307	13	99,300	7,045,266	70.9
14-15	0.000163	99,294	16	99,286	6,945,965	70.0
15-16	0.000194	99,277	19	99,268	6,846,680	69.0
16-17	0.000225	99,258	22	99,247	6,747,412	68.0
17-18	0.000256	99,236	25	99,223	6,648,165	67.0
18-19	0.000284	99,210	28	99,196	6,548,942	66.0
19-20	0.000310	99,182	31	99,167	6,449,746	65.0
20-21	0.000339	99,151	34	99,135	6,350,579	64.0
21-22	0.000367	99,118	36	99,100	6,251,444	63.1
22-23	0.000385	99,081	38	99,062	6,152,345	62.1
23-24	0.000388	99,043	38	99,024	6,053,282	61.1
24-25	0.000382	99,005	38	98,986	5,954,258	60.1
25-26	0.000374	98,967	37	98,949	5,855,272	59.2
26-27	0.000370	98,930	37	98,912	5,756,324	58.2
27-28	0.000368	98,893	36	98,875	5,657,412	57.2
28-29	0.000370	98,857	37	98,839	5,558,537	56.2
29-30	0.000376	98,820	37	98,802	5,459,698	55.2
30-31	0.000383	98,783	38	98,764	5,360,896	54.3
31-32	0.000393	98,746	39	98,726	5,262,132	53.3
32-33	0.000414	98,707	41	98,686	5,163,406	52.3
33-34	0.000462	98,666	46	98,643	5,064,719	51.3
34-35	0.000521	98,620	51	98,595	4,966,076	50.4
35-36	0.000592	98,569	58	98,540	4,867,482	49.4
36-37	0.000664	98,511	65	98,478	4,768,942	48.4
37-38	0.000731	98,445	72	98,409	4,670,464	47.4
38-39	0.000787	98,373	77	98,334	4,572,055	46.5
39-40	0.000838	98,296	82	98,254	4,473,721	45.5
40-41	0.000888	98,213	87	98,170	4,375,466	44.6
41-42	0.000953	98,126	93	98,079	4,277,296	43.6
42-43	0.001041	98,033	102	97,982	4,179,217	42.6
43-44	0.001162	97,931	114	97,874	4,081,235	41.7
44-45	0.001310	97,817	128	97,753	3,983,362	40.7
45-46	0.001474	97,689	144	97,617	3,885,609	39.8
46-47	0.001643	97,545	160	97,465	3,787,992	38.8
47-48	0.001823	97,384	177	97,296	3,690,528	37.9
48-49	0.002012	97,207	196	97,109	3,593,232	37.0
49-50	0.002212	97,011	215	96,904	3,496,123	36.0
50-51	0.002436	96,797	236	96,679	3,399,219	35.1
51-52	0.002676	96,561	258	96,432	3,302,540	34.2
52-53	0.002908	96,302	280	96,162	3,206,109	33.3
53-54	0.003115	96,022	299	95,873	3,109,946	32.4
54-55	0.003306	95,723	316	95,565	3,014,073	31.5
55-56	0.003502	95,407	334	95,240	2,918,508	30.6
56-57	0.003726	95,073	354	94,896	2,823,268	29.7
57-58	0.003982	94,719	377	94,530	2,728,373	28.8
58-59	0.004286	94,341	404	94,139	2,633,843	27.9
59-60	0.004642	93,937	436	93,719	2,539,704	27.0
60-61	0.005045	93,501	472	93,265	2,445,985	26.2
61-62	0.005497	93,029	511	92,774	2,352,719	25.3
62-63	0.006021	92,518	557	92,239	2,259,946	24.4
63-64	0.006626	91,961	609	91,656	2,167,707	23.6
64-65	0.007317	91,351	668	91,017	2,076,050	22.7

Table 12. Life table for Hispanic females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table12.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.008112	90,683	736	90,315	1,985,033	21.9
66-67	0.009004	89,948	810	89,543	1,894,718	21.1
67-68	0.009951	89,138	887	88,694	1,805,175	20.3
68-69	0.010921	88,251	964	87,769	1,716,481	19.5
69-70	0.011922	87,287	1,041	86,767	1,628,712	18.7
70-71	0.012959	86,246	1,118	85,687	1,541,946	17.9
71-72	0.014119	85,129	1,202	84,528	1,456,258	17.1
72-73	0.015510	83,927	1,302	83,276	1,371,731	16.3
73-74	0.017219	82,625	1,423	81,914	1,288,455	15.6
74-75	0.019221	81,202	1,561	80,422	1,206,541	14.9
75-76	0.021328	79,642	1,699	78,792	1,126,119	14.1
76-77	0.023578	77,943	1,838	77,024	1,047,327	13.4
77-78	0.026226	76,105	1,996	75,107	970,303	12.7
78-79	0.029338	74,109	2,174	73,022	895,196	12.1
79-80	0.032868	71,935	2,364	70,753	822,173	11.4
80-81	0.036780	69,571	2,559	68,291	751,421	10.8
81-82	0.041071	67,012	2,752	65,636	683,129	10.2
82-83	0.045714	64,260	2,938	62,791	617,494	9.6
83-84	0.050854	61,322	3,118	59,763	554,703	9.0
84-85	0.056537	58,204	3,291	56,558	494,940	8.5
85-86	0.062813	54,913	3,449	53,188	438,382	8.0
86-87	0.069735	51,464	3,589	49,669	385,193	7.5
87-88	0.077356	47,875	3,703	46,023	335,524	7.0
88-89	0.085733	44,171	3,787	42,278	289,501	6.6
89-90	0.094925	40,385	3,833	38,468	247,223	6.1
90-91	0.104988	36,551	3,837	34,632	208,755	5.7
91-92	0.115982	32,714	3,794	30,816	174,123	5.3
92-93	0.127963	28,919	3,701	27,069	143,306	5.0
93-94	0.140983	25,219	3,555	23,441	116,237	4.6
94-95	0.155093	21,663	3,360	19,983	92,796	4.3
95-96	0.170335	18,304	3,118	16,745	72,813	4.0
96-97	0.186744	15,186	2,836	13,768	56,068	3.7
97-98	0.204344	12,350	2,524	11,088	42,300	3.4
98-99	0.223148	9,826	2,193	8,730	31,212	3.2
99-100	0.243154	7,634	1,856	6,706	22,482	2.9
100 and over	1.00000	5,777	5,777	15,777	15,777	2.7

Table 13. Life table for the non-Hispanic white population: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table13.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005630	100,000	563	99,507	7,824,824	78.2
1-2	0.000402	99,437	40	99,417	7,725,317	77.7
2-3	0.000259	99,397	26	99,384	7,625,900	76.7
3-4	0.000199	99,371	20	99,361	7,526,516	75.7
4-5	0.000154	99,352	15	99,344	7,427,154	74.8
5-6	0.000149	99,336	15	99,329	7,327,810	73.8
6-7	0.000140	99,321	14	99,315	7,228,481	72.8
7-8	0.000131	99,308	13	99,301	7,129,167	71.8
8-9	0.000115	99,295	11	99,289	7,029,866	70.8
9-10	0.000096	99,283	10	99,278	6,930,577	69.8
10-11	0.000080	99,274	8	99,270	6,831,298	68.8
11-12	0.000083	99,266	8	99,262	6,732,029	67.8
12-13	0.000118	99,257	12	99,252	6,632,767	66.8
13-14	0.000194	99,246	19	99,236	6,533,516	65.8
14-15	0.000295	99,226	29	99,212	6,434,280	64.8
15-16	0.000402	99,197	40	99,177	6,335,068	63.9
16-17	0.000499	99,157	50	99,133	6,235,890	62.9
17-18	0.000590	99,108	58	99,079	6,136,758	61.9
18-19	0.000670	99,049	66	99,016	6,037,679	61.0
19-20	0.000742	98,983	73	98,946	5,938,663	60.0
20-21	0.000817	98,910	81	98,869	5,839,717	59.0
21-22	0.000890	98,829	88	98,785	5,740,848	58.1
22-23	0.000940	98,741	93	98,694	5,642,063	57.1
23-24	0.000961	98,648	95	98,601	5,543,368	56.2
24-25	0.000959	98,553	95	98,506	5,444,768	55.2
25-26	0.000951	98,459	94	98,412	5,346,262	54.3
26-27	0.000948	98,365	93	98,318	5,247,850	53.4
27-28	0.000949	98,272	93	98,225	5,149,531	52.4
28-29	0.000959	98,179	94	98,132	5,051,306	51.5
29-30	0.000980	98,084	96	98,036	4,953,175	50.5
30-31	0.001010	97,988	99	97,939	4,855,138	49.5
31-32	0.001046	97,889	102	97,838	4,757,200	48.6
32-33	0.001093	97,787	107	97,734	4,659,361	47.6
33-34	0.001130	97,680	110	97,625	4,561,628	46.7
34-35	0.001176	97,570	115	97,512	4,464,003	45.8
35-36	0.001230	97,455	120	97,395	4,366,491	44.8
36-37	0.001297	97,335	126	97,272	4,269,096	43.9
37-38	0.001383	97,209	134	97,142	4,171,823	42.9
38-39	0.001494	97,074	145	97,002	4,074,682	42.0
39-40	0.001629	96,929	158	96,851	3,977,680	41.0
40-41	0.001776	96,772	172	96,686	3,880,829	40.1
41-42	0.001934	96,600	187	96,506	3,784,143	39.2
42-43	0.002116	96,413	204	96,311	3,687,637	38.2
43-44	0.002320	96,209	223	96,097	3,591,326	37.3
44-45	0.002537	95,986	244	95,864	3,495,229	36.4
45-46	0.002759	95,742	264	95,610	3,399,365	35.5
46-47	0.002985	95,478	285	95,336	3,303,755	34.6
47-48	0.003226	95,193	307	95,040	3,208,419	33.7
48-49	0.003491	94,886	331	94,720	3,113,380	32.8
49-50	0.003784	94,555	358	94,376	3,018,659	31.9
50-51	0.004106	94,197	387	94,004	2,924,283	31.0
51-52	0.004447	93,810	417	93,602	2,830,280	30.2
52-53	0.004800	93,393	448	93,169	2,736,678	29.3
53-54	0.005156	92,945	479	92,705	2,643,509	28.4
54-55	0.005523	92,466	511	92,210	2,550,804	27.6
55-56	0.005912	91,955	544	91,683	2,458,594	26.7
56-57	0.006342	91,411	580	91,121	2,366,911	25.9
57-58	0.006827	90,831	620	90,521	2,275,790	25.1
58-59	0.007384	90,211	666	89,878	2,185,268	24.2
59-60	0.008012	89,545	717	89,187	2,095,390	23.4
60-61	0.008716	88,828	774	88,441	2,006,203	22.6
61-62	0.009481	88,054	835	87,636	1,917,763	21.8
62-63	0.010298	87,219	898	86,770	1,830,127	21.0
63-64	0.011170	86,321	964	85,838	1,743,357	20.2
64-65	0.012129	85,356	1,035	84,839	1,657,518	19.4

Table 13. Life table for the non-Hispanic white population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table13.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.013260	84,321	1,118	83,762	1,572,680	18.7
66-67	0.014427	83,203	1,200	82,603	1,488,918	17.9
67-68	0.015701	82,003	1,288	81,359	1,406,315	17.1
68-69	0.017048	80,715	1,376	80,027	1,324,956	16.4
69-70	0.018520	79,339	1,469	78,604	1,244,929	15.7
70-71	0.020194	77,870	1,572	77,084	1,166,325	15.0
71-72	0.022170	76,297	1,692	75,452	1,089,241	14.3
72-73	0.024478	74,606	1,826	73,693	1,013,789	13.6
73-74	0.027129	72,780	1,974	71,792	940,097	12.9
74-75	0.030106	70,805	2,132	69,739	868,305	12.3
75-76	0.033436	68,673	2,296	67,525	798,565	11.6
76-77	0.037050	66,377	2,459	65,148	731,040	11.0
77-78	0.041038	63,918	2,623	62,606	665,892	10.4
78-79	0.045435	61,295	2,785	59,903	603,286	9.8
79-80	0.050278	58,510	2,942	57,039	543,383	9.3
80-81	0.055607	55,568	3,090	54,023	486,344	8.8
81-82	0.061465	52,478	3,226	50,866	432,321	8.2
82-83	0.067896	49,253	3,344	47,581	381,455	7.7
83-84	0.074945	45,909	3,441	44,188	333,875	7.3
84-85	0.082662	42,468	3,510	40,713	289,686	6.8
85-86	0.091095	38,958	3,549	37,183	248,974	6.4
86-87	0.100294	35,409	3,551	33,633	211,790	6.0
87-88	0.110309	31,857	3,514	30,100	178,157	5.6
88-89	0.121190	28,343	3,435	26,626	148,057	5.2
89-90	0.132984	24,908	3,312	23,252	121,431	4.9
90-91	0.145735	21,596	3,147	20,022	98,179	4.5
91-92	0.159483	18,449	2,942	16,978	78,157	4.2
92-93	0.174264	15,506	2,702	14,155	61,179	3.9
93-94	0.190106	12,804	2,434	11,587	47,024	3.7
94-95	0.207026	10,370	2,147	9,297	35,436	3.4
95-96	0.225034	8,223	1,850	7,298	26,140	3.2
96-97	0.244126	6,373	1,556	5,595	18,842	3.0
97-98	0.264285	4,817	1,273	4,180	13,247	2.8
98-99	0.285481	3,544	1,012	3,038	9,067	2.6
99-100	0.307665	2,532	779	2,143	6,029	2.4
100 and over	1.00000	1,753	1,753	3,886	3,886	2.2

Table 14. Life table for non-Hispanic white males: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table14.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.006195	100,000	619	99,459	7,580,601	75.8
1-2	0.000431	99,381	43	99,359	7,481,142	75.3
2-3	0.000281	99,338	28	99,324	7,381,783	74.3
3-4	0.000221	99,310	22	99,299	7,282,459	73.3
4-5	0.000180	99,288	18	99,279	7,183,160	72.3
5-6	0.000164	99,270	16	99,262	7,083,881	71.4
6-7	0.000154	99,254	15	99,246	6,984,620	70.4
7-8	0.000142	99,238	14	99,231	6,885,373	69.4
8-9	0.000122	99,224	12	99,218	6,786,142	68.4
9-10	0.000097	99,212	10	99,208	6,686,924	67.4
10-11	0.000077	99,203	8	99,199	6,587,716	66.4
11-12	0.000081	99,195	8	99,191	6,488,517	65.4
12-13	0.000129	99,187	13	99,181	6,389,326	64.4
13-14	0.000232	99,174	23	99,163	6,290,146	63.4
14-15	0.000369	99,151	37	99,133	6,190,983	62.4
15-16	0.000512	99,115	51	99,089	6,091,850	61.5
16-17	0.000643	99,064	64	99,032	5,992,761	60.5
17-18	0.000774	99,000	77	98,962	5,893,729	59.5
18-19	0.000904	98,924	89	98,879	5,794,767	58.6
19-20	0.001031	98,834	102	98,783	5,695,888	57.6
20-21	0.001167	98,732	115	98,675	5,597,105	56.7
21-22	0.001293	98,617	128	98,553	5,498,430	55.8
22-23	0.001378	98,489	136	98,422	5,399,877	54.8
23-24	0.001406	98,354	138	98,285	5,301,455	53.9
24-25	0.001391	98,215	137	98,147	5,203,171	53.0
25-26	0.001361	98,079	134	98,012	5,105,023	52.1
26-27	0.001340	97,945	131	97,880	5,007,011	51.1
27-28	0.001325	97,814	130	97,749	4,909,132	50.2
28-29	0.001327	97,685	130	97,620	4,811,382	49.3
29-30	0.001343	97,555	131	97,489	4,713,762	48.3
30-31	0.001370	97,424	133	97,357	4,616,273	47.4
31-32	0.001400	97,290	136	97,222	4,518,916	46.4
32-33	0.001451	97,154	141	97,084	4,421,694	45.5
33-34	0.001479	97,013	143	96,942	4,324,610	44.6
34-35	0.001526	96,870	148	96,796	4,227,668	43.6
35-36	0.001584	96,722	153	96,645	4,130,872	42.7
36-37	0.001660	96,569	160	96,489	4,034,227	41.8
37-38	0.001758	96,409	170	96,324	3,937,738	40.8
38-39	0.001886	96,239	182	96,148	3,841,414	39.9
39-40	0.002045	96,057	196	95,959	3,745,266	39.0
40-41	0.002219	95,861	213	95,755	3,649,307	38.1
41-42	0.002410	95,648	231	95,533	3,553,552	37.2
42-43	0.002633	95,418	251	95,292	3,458,019	36.2
43-44	0.002885	95,167	275	95,029	3,362,727	35.3
44-45	0.003157	94,892	300	94,742	3,267,697	34.4
45-46	0.003433	94,593	325	94,430	3,172,955	33.5
46-47	0.003716	94,268	350	94,093	3,078,525	32.7
47-48	0.004024	93,918	378	93,729	2,984,432	31.8
48-49	0.004373	93,540	409	93,335	2,890,704	30.9
49-50	0.004762	93,131	443	92,909	2,797,368	30.0
50-51	0.005189	92,687	481	92,447	2,704,460	29.2
51-52	0.005636	92,206	520	91,946	2,612,013	28.3
52-53	0.006093	91,687	559	91,407	2,520,067	27.5
53-54	0.006548	91,128	597	90,830	2,428,659	26.7
54-55	0.007009	90,531	635	90,214	2,337,830	25.8
55-56	0.007496	89,897	674	89,560	2,247,616	25.0
56-57	0.008030	89,223	716	88,865	2,158,056	24.2
57-58	0.008617	88,506	763	88,125	2,069,192	23.4
58-59	0.009273	87,744	814	87,337	1,981,067	22.6
59-60	0.010002	86,930	869	86,495	1,893,730	21.8
60-61	0.010812	86,061	930	85,595	1,807,234	21.0
61-62	0.011694	85,130	995	84,632	1,721,639	20.2
62-63	0.012648	84,135	1,064	83,602	1,637,007	19.5
63-64	0.013689	83,070	1,137	82,502	1,553,404	18.7
64-65	0.014851	81,933	1,217	81,325	1,470,903	18.0

Table 14. Life table for non-Hispanic white males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table14.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.016219	80,716	1,309	80,062	1,389,578	17.2
66-67	0.017658	79,407	1,402	78,706	1,309,516	16.5
67-68	0.019235	78,005	1,500	77,255	1,230,810	15.8
68-69	0.020904	76,505	1,599	75,705	1,153,555	15.1
69-70	0.022718	74,906	1,702	74,055	1,077,849	14.4
70-71	0.024761	73,204	1,813	72,298	1,003,795	13.7
71-72	0.027158	71,391	1,939	70,422	931,497	13.0
72-73	0.029955	69,452	2,080	68,412	861,075	12.4
73-74	0.033160	67,372	2,234	66,255	792,663	11.8
74-75	0.036739	65,138	2,393	63,941	726,408	11.2
75-76	0.040704	62,745	2,554	61,468	662,467	10.6
76-77	0.044970	60,191	2,707	58,837	600,999	10.0
77-78	0.049660	57,484	2,855	56,057	542,162	9.4
78-79	0.054810	54,629	2,994	53,132	486,105	8.9
79-80	0.060461	51,635	3,122	50,074	432,973	8.4
80-81	0.066654	48,513	3,234	46,896	382,899	7.9
81-82	0.073431	45,280	3,325	43,617	336,002	7.4
82-83	0.080837	41,955	3,392	40,259	292,385	7.0
83-84	0.088919	38,563	3,429	36,849	252,126	6.5
84-85	0.097723	35,134	3,433	33,417	215,278	6.1
85-86	0.107297	31,701	3,401	30,000	181,860	5.7
86-87	0.117685	28,299	3,330	26,634	151,860	5.4
87-88	0.128934	24,969	3,219	23,359	125,226	5.0
88-89	0.141087	21,750	3,069	20,215	101,867	4.7
89-90	0.154182	18,681	2,880	17,241	81,651	4.4
90-91	0.168254	15,801	2,659	14,471	64,410	4.1
91-92	0.183332	13,142	2,409	11,938	49,939	3.8
92-93	0.199438	10,733	2,141	9,663	38,001	3.5
93-94	0.216583	8,592	1,861	7,662	28,339	3.3
94-95	0.234770	6,731	1,580	5,941	20,677	3.1
95-96	0.253990	5,151	1,308	4,497	14,736	2.9
96-97	0.274218	3,843	1,054	3,316	10,239	2.7
97-98	0.295420	2,789	824	2,377	6,923	2.5
98-99	0.317544	1,965	624	1,653	4,546	2.3
99-100	0.340524	1,341	457	1,113	2,893	2.2
100 and over	1.00000	884	884	1,780	1,780	2.0

Table 15. Life table for non-Hispanic white females: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table15.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005035	100,000	503	99,558	8,061,655	80.6
1-2	0.000371	99,497	37	99,478	7,962,097	80.0
2-3	0.000236	99,460	23	99,448	7,862,619	79.1
3-4	0.000177	99,436	18	99,427	7,763,171	78.1
4-5	0.000126	99,419	12	99,412	7,663,743	77.1
5-6	0.000134	99,406	13	99,399	7,564,331	76.1
6-7	0.000126	99,393	13	99,386	7,464,932	75.1
7-8	0.000119	99,380	12	99,374	7,365,545	74.1
8-9	0.000108	99,368	11	99,363	7,266,171	73.1
9-10	0.000095	99,358	9	99,353	7,166,808	72.1
10-11	0.000084	99,348	8	99,344	7,067,455	71.1
11-12	0.000084	99,340	8	99,336	6,968,111	70.1
12-13	0.000106	99,331	11	99,326	6,868,775	69.2
13-14	0.000154	99,321	15	99,313	6,769,449	68.2
14-15	0.000217	99,306	22	99,295	6,670,136	67.2
15-16	0.000286	99,284	28	99,270	6,570,841	66.2
16-17	0.000348	99,256	35	99,238	6,471,571	65.2
17-18	0.000395	99,221	39	99,202	6,372,332	64.2
18-19	0.000422	99,182	42	99,161	6,273,131	63.2
19-20	0.000436	99,140	43	99,119	6,173,970	62.3
20-21	0.000447	99,097	44	99,075	6,074,851	61.3
21-22	0.000462	99,053	46	99,030	5,975,776	60.3
22-23	0.000477	99,007	47	98,983	5,876,746	59.4
23-24	0.000493	98,960	49	98,935	5,777,763	58.4
24-25	0.000510	98,911	50	98,886	5,678,828	57.4
25-26	0.000528	98,860	52	98,834	5,579,942	56.4
26-27	0.000547	98,808	54	98,781	5,481,108	55.5
27-28	0.000567	98,754	56	98,726	5,382,327	54.5
28-29	0.000588	98,698	58	98,669	5,283,601	53.5
29-30	0.000613	98,640	60	98,610	5,184,932	52.6
30-31	0.000646	98,580	64	98,548	5,086,322	51.6
31-32	0.000689	98,516	68	98,482	4,987,774	50.6
32-33	0.000736	98,448	72	98,412	4,889,292	49.7
33-34	0.000779	98,376	77	98,337	4,790,880	48.7
34-35	0.000824	98,299	81	98,259	4,692,543	47.7
35-36	0.000871	98,218	86	98,175	4,594,285	46.8
36-37	0.000930	98,132	91	98,087	4,496,109	45.8
37-38	0.001003	98,041	98	97,992	4,398,022	44.9
38-39	0.001097	97,943	107	97,889	4,300,030	43.9
39-40	0.001210	97,835	118	97,776	4,202,141	43.0
40-41	0.001331	97,717	130	97,652	4,104,365	42.0
41-42	0.001459	97,587	142	97,516	4,006,713	41.1
42-43	0.001602	97,445	156	97,367	3,909,197	40.1
43-44	0.001758	97,289	171	97,203	3,811,830	39.2
44-45	0.001922	97,118	187	97,024	3,714,627	38.2
45-46	0.002089	96,931	203	96,830	3,617,603	37.3
46-47	0.002259	96,728	219	96,619	3,520,774	36.4
47-48	0.002434	96,510	235	96,392	3,424,154	35.5
48-49	0.002619	96,275	252	96,149	3,327,762	34.6
49-50	0.002819	96,023	271	95,887	3,231,613	33.7
50-51	0.003041	95,752	291	95,607	3,135,726	32.7
51-52	0.003280	95,461	313	95,304	3,040,119	31.8
52-53	0.003532	95,148	336	94,980	2,944,815	30.9
53-54	0.003795	94,812	360	94,632	2,849,835	30.1
54-55	0.004073	94,452	385	94,260	2,755,203	29.2
55-56	0.004370	94,067	411	93,862	2,660,943	28.3
56-57	0.004703	93,656	440	93,436	2,567,082	27.4
57-58	0.005094	93,216	475	92,978	2,473,646	26.5
58-59	0.005562	92,741	516	92,483	2,380,667	25.7
59-60	0.006102	92,225	563	91,944	2,288,184	24.8
60-61	0.006717	91,662	616	91,355	2,196,240	24.0
61-62	0.007382	91,047	672	90,711	2,104,886	23.1
62-63	0.008083	90,375	730	90,009	2,014,175	22.3
63-64	0.008812	89,644	790	89,249	1,924,166	21.5
64-65	0.009603	88,854	853	88,428	1,834,917	20.7

Table 15. Life table for non-Hispanic white females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table15.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.010540	88,001	927	87,537	1,746,489	19.8
66-67	0.011501	87,073	1,001	86,573	1,658,952	19.1
67-68	0.012550	86,072	1,080	85,532	1,572,379	18.3
68-69	0.013664	84,992	1,161	84,411	1,486,848	17.5
69-70	0.014895	83,830	1,249	83,206	1,402,436	16.7
70-71	0.016318	82,582	1,348	81,908	1,319,230	16.0
71-72	0.018016	81,234	1,463	80,502	1,237,322	15.2
72-73	0.020007	79,771	1,596	78,973	1,156,820	14.5
73-74	0.022305	78,175	1,744	77,303	1,077,847	13.8
74-75	0.024913	76,431	1,904	75,479	1,000,544	13.1
75-76	0.027866	74,527	2,077	73,489	925,065	12.4
76-77	0.031092	72,450	2,253	71,324	851,577	11.8
77-78	0.034677	70,198	2,434	68,980	780,253	11.1
78-79	0.038660	67,763	2,620	66,453	711,273	10.5
79-80	0.043079	65,144	2,806	63,740	644,819	9.9
80-81	0.047979	62,337	2,991	60,842	581,079	9.3
81-82	0.053404	59,346	3,169	57,762	520,237	8.8
82-83	0.059405	56,177	3,337	54,508	462,475	8.2
83-84	0.066033	52,840	3,489	51,095	407,967	7.7
84-85	0.073343	49,351	3,620	47,541	356,872	7.2
85-86	0.081391	45,731	3,722	43,870	309,331	6.8
86-87	0.090237	42,009	3,791	40,114	265,461	6.3
87-88	0.099940	38,218	3,820	36,308	225,347	5.9
88-89	0.110559	34,399	3,803	32,497	189,039	5.5
89-90	0.122153	30,596	3,737	28,727	156,541	5.1
90-91	0.134779	26,858	3,620	25,048	127,815	4.8
91-92	0.148489	23,238	3,451	21,513	102,766	4.4
92-93	0.163330	19,788	3,232	18,172	81,253	4.1
93-94	0.179343	16,556	2,969	15,071	63,081	3.8
94-95	0.196556	13,587	2,671	12,251	48,010	3.5
95-96	0.214989	10,916	2,347	9,743	35,759	3.3
96-97	0.234646	8,569	2,011	7,564	26,016	3.0
97-98	0.255515	6,559	1,676	5,721	18,452	2.8
98-99	0.277566	4,883	1,355	4,205	12,732	2.6
99-100	0.300753	3,527	1,061	2,997	8,527	2.4
100 and over	1.00000	2,467	2,467	5,530	5,530	2.2

Table 16. Life table for the non-Hispanic black population: United States, 2007Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table16.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.013341	100,000	1,334	98,826	7,322,637	73.2
1-2	0.007711	98,666	70	98,631	7,223,811	73.2
2-3	0.000461	98,596	45	98,573	7,125,180	72.3
3-4	0.000340	98,550	34	98,534	7,026,607	71.3
4-5	0.000269	98,517	26	98,504	6,928,073	70.3
5-6	0.000237	98,490	23	98,479	6,829,570	69.3
6-7	0.000210	98,467	21	98,457	6,731,091	68.4
7-8	0.000189	98,446	19	98,437	6,632,634	67.4
8-9	0.000167	98,428	16	98,420	6,534,197	66.4
9-10	0.000145	98,411	14	98,404	6,435,778	65.4
10-11	0.000133	98,397	13	98,391	6,337,374	64.4
11-12	0.000145	98,384	14	98,377	6,238,983	63.4
12-13	0.000202	98,370	20	98,360	6,140,606	62.4
13-14	0.000310	98,350	30	98,335	6,042,246	61.4
14-15	0.000450	98,319	44	98,297	5,943,912	60.5
15-16	0.000599	98,275	59	98,246	5,845,615	59.5
16-17	0.000737	98,216	72	98,180	5,747,369	58.5
17-18	0.000866	98,144	85	98,101	5,649,189	57.6
18-19	0.000986	98,059	97	98,011	5,551,087	56.6
19-20	0.001101	97,962	108	97,908	5,453,077	55.7
20-21	0.001228	97,854	120	97,794	5,355,168	54.7
21-22	0.001358	97,734	133	97,668	5,257,374	53.8
22-23	0.001462	97,602	143	97,530	5,159,706	52.9
23-24	0.001523	97,459	148	97,385	5,062,176	51.9
24-25	0.001549	97,311	151	97,235	4,964,791	51.0
25-26	0.001566	97,160	152	97,084	4,867,556	50.1
26-27	0.001589	97,008	154	96,931	4,770,472	49.2
27-28	0.001616	96,854	157	96,775	4,673,541	48.3
28-29	0.001654	96,697	160	96,617	4,576,766	47.3
29-30	0.001705	96,537	165	96,455	4,480,149	46.4
30-31	0.001766	96,372	170	96,287	4,383,695	45.5
31-32	0.001836	96,202	177	96,114	4,287,407	44.6
32-33	0.001940	96,026	186	95,932	4,191,293	43.6
33-34	0.002019	95,839	194	95,743	4,095,361	42.7
34-35	0.002127	95,646	203	95,544	3,999,618	41.8
35-36	0.002245	95,442	214	95,335	3,904,074	40.9
36-37	0.002378	95,228	226	95,115	3,808,739	40.0
37-38	0.002528	95,002	240	94,882	3,713,624	39.1
38-39	0.002700	94,761	256	94,633	3,618,743	38.2
39-40	0.002897	94,506	274	94,369	3,524,109	37.3
40-41	0.003110	94,232	293	94,085	3,429,740	36.4
41-42	0.003346	93,939	314	93,781	3,335,655	35.5
42-43	0.003627	93,624	340	93,454	3,241,874	34.6
43-44	0.003959	93,285	369	93,100	3,148,419	33.8
44-45	0.004333	92,915	403	92,714	3,055,319	32.9
45-46	0.004719	92,513	437	92,295	2,962,605	32.0
46-47	0.005122	92,076	472	91,840	2,870,311	31.2
47-48	0.005584	91,605	512	91,349	2,778,470	30.3
48-49	0.006129	91,093	558	90,814	2,687,121	29.5
49-50	0.006752	90,535	611	90,229	2,596,307	28.7
50-51	0.007438	89,923	669	89,589	2,506,078	27.9
51-52	0.008154	89,255	728	88,891	2,416,489	27.1
52-53	0.008881	88,527	786	88,134	2,327,599	26.3
53-54	0.009588	87,741	841	87,320	2,239,465	25.5
54-55	0.010279	86,899	893	86,453	2,152,145	24.8
55-56	0.011009	86,006	947	85,533	2,065,692	24.0
56-57	0.011792	85,059	1,003	84,558	1,980,159	23.3
57-58	0.012587	84,056	1,058	83,527	1,895,602	22.6
58-59	0.013405	82,998	1,113	82,442	1,812,074	21.8
59-60	0.014283	81,886	1,170	81,301	1,729,632	21.1
60-61	0.015278	80,716	1,233	80,100	1,648,331	20.4
61-62	0.016408	79,483	1,304	78,831	1,568,232	19.7
62-63	0.017623	78,179	1,378	77,490	1,489,401	19.1
63-64	0.018851	76,801	1,448	76,077	1,411,911	18.4
64-65	0.020066	75,353	1,512	74,597	1,335,834	17.7

Table 16. Life table for the non-Hispanic black population: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/16/16.xls

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.021318	73,841	1,574	73,054	1,261,237	17.1
66-67	0.022528	72,267	1,628	71,453	1,188,183	16.4
67-68	0.023902	70,639	1,688	69,795	1,116,730	15.8
68-69	0.025475	68,951	1,757	68,072	1,046,935	15.2
69-70	0.027254	67,194	1,831	66,279	978,862	14.6
70-71	0.029206	65,363	1,909	64,408	912,584	14.0
71-72	0.031392	63,454	1,992	62,458	848,175	13.4
72-73	0.033912	61,462	2,084	60,420	785,718	12.8
73-74	0.036789	59,378	2,184	58,285	725,298	12.2
74-75	0.039988	57,193	2,287	56,050	667,012	11.7
75-76	0.043473	54,906	2,387	53,713	610,963	11.1
76-77	0.047053	52,519	2,471	51,284	557,250	10.6
77-78	0.050912	50,048	2,548	48,774	505,966	10.1
78-79	0.055069	47,500	2,616	46,192	457,192	9.6
79-80	0.059545	44,884	2,673	43,548	411,000	9.2
80-81	0.064359	42,212	2,717	40,853	367,452	8.7
81-82	0.069534	39,495	2,746	38,122	326,599	8.3
82-83	0.075091	36,749	2,760	35,369	288,477	7.9
83-84	0.081055	33,989	2,755	32,612	253,109	7.4
84-85	0.087446	31,234	2,731	29,869	220,497	7.1
85-86	0.094290	28,503	2,688	27,159	190,628	6.7
86-87	0.101611	25,815	2,623	24,504	163,469	6.3
87-88	0.109430	23,192	2,538	21,923	138,966	6.0
88-89	0.117773	20,654	2,433	19,438	117,042	5.7
89-90	0.126661	18,222	2,308	17,068	97,604	5.4
90-91	0.136117	15,914	2,166	14,831	80,536	5.1
91-92	0.146160	13,748	2,009	12,743	65,706	4.8
92-93	0.156810	11,738	1,841	10,818	52,963	4.5
93-94	0.168083	9,898	1,664	9,066	42,145	4.3
94-95	0.179994	8,234	1,482	7,493	33,079	4.0
95-96	0.192553	6,752	1,300	6,102	25,586	3.8
96-97	0.205768	5,452	1,122	4,891	19,484	3.6
97-98	0.219644	4,330	951	3,854	14,593	3.4
98-99	0.234180	3,379	791	2,983	10,739	3.2
99-100	0.249370	2,588	645	2,265	7,756	3.0
100 and over	1.00000	1,942	1,942	5,491	5,491	2.8

Table 17. Life table for non-Hispanic black males: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table17.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.014504	100,000	1,450	98,727	6,963,840	69.6
1-2	0.00744	98,550	73	98,513	6,865,113	69.7
2-3	0.000488	98,476	48	98,452	6,766,600	68.7
3-4	0.000371	98,428	37	98,410	6,668,148	67.7
4-5	0.000295	98,392	29	98,377	6,569,738	66.8
5-6	0.000260	98,363	26	98,350	6,471,361	65.8
6-7	0.000240	98,337	24	98,325	6,373,011	64.8
7-8	0.000221	98,313	22	98,303	6,274,686	63.8
8-9	0.000189	98,292	19	98,283	6,176,383	62.8
9-10	0.000147	98,273	14	98,266	6,078,100	61.8
10-11	0.000114	98,259	11	98,253	5,979,834	60.9
11-12	0.000123	98,248	12	98,242	5,881,581	59.9
12-13	0.000210	98,235	21	98,225	5,783,340	58.9
13-14	0.000391	98,215	38	98,196	5,685,115	57.9
14-15	0.000632	98,177	62	98,146	5,586,919	56.9
15-16	0.000886	98,114	87	98,071	5,488,773	55.9
16-17	0.001117	98,028	109	97,973	5,390,702	55.0
17-18	0.001332	97,918	130	97,853	5,292,729	54.1
18-19	0.001526	97,788	149	97,713	5,194,877	53.1
19-20	0.001709	97,638	167	97,555	5,097,163	52.2
20-21	0.001909	97,472	186	97,379	4,999,608	51.3
21-22	0.002110	97,286	205	97,183	4,902,230	50.4
22-23	0.002262	97,080	220	96,970	4,805,047	49.5
23-24	0.002337	96,861	226	96,748	4,708,076	48.6
24-25	0.002351	96,634	227	96,521	4,611,329	47.7
25-26	0.002342	96,407	226	96,294	4,514,808	46.8
26-27	0.002342	96,181	225	96,069	4,418,514	45.9
27-28	0.002352	95,956	226	95,843	4,322,445	45.0
28-29	0.002386	95,731	228	95,616	4,226,602	44.2
29-30	0.002444	95,502	233	95,385	4,130,985	43.3
30-31	0.002514	95,269	239	95,149	4,035,600	42.4
31-32	0.002589	95,029	246	94,906	3,940,451	41.5
32-33	0.002717	94,783	257	94,654	3,845,545	40.6
33-34	0.002762	94,526	261	94,395	3,750,890	39.7
34-35	0.002855	94,265	269	94,130	3,656,495	38.8
35-36	0.002962	93,996	278	93,856	3,562,365	37.9
36-37	0.003091	93,717	290	93,572	3,468,508	37.0
37-38	0.003248	93,427	303	93,276	3,374,936	36.1
38-39	0.003441	93,124	320	92,964	3,281,660	35.2
39-40	0.003672	92,804	341	92,633	3,188,697	34.4
40-41	0.003931	92,463	363	92,281	3,096,064	33.5
41-42	0.004219	92,099	389	91,905	3,003,783	32.6
42-43	0.004557	91,711	418	91,502	2,911,877	31.8
43-44	0.004950	91,293	452	91,067	2,820,376	30.9
44-45	0.005393	90,841	490	90,596	2,729,309	30.0
45-46	0.005847	90,351	528	90,087	2,638,713	29.2
46-47	0.006335	89,823	569	89,538	2,548,626	28.4
47-48	0.006928	89,254	618	88,945	2,459,088	27.6
48-49	0.007670	88,635	680	88,296	2,370,143	26.7
49-50	0.008548	87,956	752	87,580	2,281,848	25.9
50-51	0.009526	87,204	831	86,788	2,194,268	25.2
51-52	0.010544	86,373	911	85,918	2,107,480	24.4
52-53	0.011578	85,462	989	84,968	2,021,562	23.7
53-54	0.012579	84,473	1,063	83,942	1,936,594	22.9
54-55	0.013551	83,410	1,130	82,845	1,852,653	22.2
55-56	0.014579	82,280	1,200	81,680	1,769,808	21.5
56-57	0.015680	81,081	1,271	80,445	1,688,127	20.8
57-58	0.016782	79,809	1,339	79,139	1,607,682	20.1
58-59	0.017892	78,470	1,404	77,768	1,528,543	19.5
59-60	0.019055	77,066	1,469	76,332	1,450,775	18.8
60-61	0.020364	75,597	1,539	74,828	1,374,444	18.2
61-62	0.021840	74,058	1,617	73,249	1,299,616	17.5
62-63	0.023398	72,440	1,695	71,593	1,226,367	16.9
63-64	0.024930	70,745	1,764	69,864	1,154,774	16.3
64-65	0.026403	68,982	1,821	68,071	1,084,910	15.7

Table 17. Life table for non-Hispanic black males: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table17.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.027886	67,161	1,873	66,224	1,016,839	15.1
66-67	0.029413	65,288	1,920	64,327	950,615	14.6
67-68	0.031172	63,367	1,975	62,380	886,288	14.0
68-69	0.033210	61,392	2,039	60,373	823,908	13.4
69-70	0.035514	59,353	2,108	58,299	763,535	12.9
70-71	0.038004	57,245	2,176	56,158	705,236	12.3
71-72	0.040756	55,070	2,244	53,948	649,078	11.8
72-73	0.043918	52,825	2,320	51,665	595,131	11.3
73-74	0.047509	50,505	2,399	49,306	543,465	10.8
74-75	0.051445	48,106	2,475	46,869	494,160	10.3
75-76	0.055632	45,631	2,539	44,362	447,291	9.8
76-77	0.059821	43,093	2,578	41,804	402,929	9.4
77-78	0.064304	40,515	2,605	39,212	361,126	8.9
78-79	0.069099	37,910	2,619	36,600	321,913	8.5
79-80	0.074222	35,290	2,619	33,980	285,314	8.1
80-81	0.079693	32,671	2,604	31,369	251,333	7.7
81-82	0.085530	30,067	2,572	28,781	219,964	7.3
82-83	0.091752	27,495	2,523	26,234	191,183	7.0
83-84	0.098378	24,973	2,457	23,744	164,949	6.6
84-85	0.105427	22,516	2,374	21,329	141,205	6.3
85-86	0.112917	20,142	2,274	19,005	119,876	6.0
86-87	0.120868	17,868	2,160	16,788	100,871	5.6
87-88	0.129297	15,708	2,031	14,693	84,083	5.4
88-89	0.138221	13,677	1,890	12,732	69,390	5.1
89-90	0.147657	11,787	1,740	10,916	56,658	4.8
90-91	0.157620	10,046	1,583	9,255	45,742	4.6
91-92	0.168122	8,463	1,423	7,751	36,488	4.3
92-93	0.179174	7,040	1,261	6,409	28,736	4.1
93-94	0.190787	5,779	1,102	5,227	22,327	3.9
94-95	0.202967	4,676	949	4,202	17,099	3.7
95-96	0.215716	3,727	804	3,325	12,898	3.5
96-97	0.229036	2,923	669	2,588	9,573	3.3
97-98	0.242925	2,254	547	1,980	6,985	3.1
98-99	0.257374	1,706	439	1,487	5,005	2.9
99-100	0.272373	1,267	345	1,094	3,518	2.8
100 and over	1.00000	922	922	2,424	2,424	2.6

Table 18. Life table for non-Hispanic black females: United States, 2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table18.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.012138	100,000	1,214	98,929	7,654,925	76.5
1-2	0.000648	98,786	64	98,754	7,555,995	76.5
2-3	0.000414	98,722	41	98,702	7,457,241	75.5
3-4	0.000294	98,681	29	98,667	7,358,539	74.6
4-5	0.000231	98,652	23	98,641	7,259,873	73.6
5-6	0.000204	98,629	20	98,619	7,161,232	72.6
6-7	0.000171	98,609	17	98,601	7,062,613	71.6
7-8	0.000150	98,592	15	98,585	6,964,012	70.6
8-9	0.000138	98,578	14	98,571	6,865,427	69.6
9-10	0.000135	98,564	13	98,557	6,766,856	68.7
10-11	0.000141	98,551	14	98,544	6,668,299	67.7
11-12	0.000157	98,537	15	98,529	6,569,755	66.7
12-13	0.000182	98,521	18	98,512	6,471,226	65.7
13-14	0.000216	98,503	21	98,493	6,372,713	64.7
14-15	0.000256	98,482	25	98,470	6,274,220	63.7
15-16	0.000300	98,457	30	98,442	6,175,751	62.7
16-17	0.000345	98,427	34	98,410	6,077,309	61.7
17-18	0.000389	98,393	38	98,374	5,978,898	60.8
18-19	0.000432	98,355	42	98,334	5,880,524	59.8
19-20	0.000476	98,313	47	98,289	5,782,190	58.8
20-21	0.000525	98,266	52	98,240	5,683,901	57.8
21-22	0.000580	98,214	57	98,186	5,585,661	56.9
22-23	0.000636	98,157	62	98,126	5,487,475	55.9
23-24	0.000691	98,095	68	98,061	5,389,349	54.9
24-25	0.000743	98,027	73	97,991	5,291,288	54.0
25-26	0.000799	97,954	78	97,915	5,193,298	53.0
26-27	0.000858	97,876	84	97,834	5,095,383	52.1
27-28	0.000912	97,792	89	97,747	4,997,549	51.1
28-29	0.000963	97,703	94	97,656	4,899,801	50.2
29-30	0.001015	97,609	99	97,559	4,802,146	49.2
30-31	0.001075	97,510	105	97,457	4,704,586	48.2
31-32	0.001150	97,405	112	97,349	4,607,129	47.3
32-33	0.001247	97,293	121	97,232	4,509,780	46.4
33-34	0.001352	97,171	131	97,106	4,412,548	45.4
34-35	0.001473	97,040	143	96,969	4,315,443	44.5
35-36	0.001603	96,897	155	96,819	4,218,474	43.5
36-37	0.001741	96,742	168	96,658	4,121,654	42.6
37-38	0.001886	96,573	182	96,482	4,024,997	41.7
38-39	0.002040	96,391	197	96,293	3,928,515	40.8
39-40	0.002209	96,195	213	96,088	3,832,222	39.8
40-41	0.002384	95,982	229	95,868	3,736,134	38.9
41-42	0.002575	95,753	247	95,630	3,640,266	38.0
42-43	0.002808	95,507	268	95,373	3,544,636	37.1
43-44	0.003089	95,238	294	95,091	3,449,264	36.2
44-45	0.003407	94,944	323	94,783	3,354,172	35.3
45-46	0.003737	94,621	354	94,444	3,259,390	34.4
46-47	0.004070	94,267	384	94,075	3,164,946	33.6
47-48	0.004423	93,884	415	93,676	3,070,870	32.7
48-49	0.004804	93,468	449	93,244	2,977,194	31.9
49-50	0.005217	93,019	485	92,777	2,883,950	31.0
50-51	0.005666	92,534	524	92,272	2,791,174	30.2
51-52	0.006138	92,010	565	91,727	2,698,902	29.3
52-53	0.006618	91,445	605	91,142	2,607,175	28.5
53-54	0.007089	90,840	644	90,518	2,516,032	27.7
54-55	0.007556	90,196	682	89,855	2,425,514	26.9
55-56	0.008051	89,514	721	89,154	2,335,659	26.1
56-57	0.008586	88,794	762	88,412	2,246,505	25.3
57-58	0.009147	88,031	805	87,629	2,158,093	24.5
58-59	0.009753	87,226	851	86,801	2,070,464	23.7
59-60	0.010429	86,375	901	85,925	1,983,664	23.0
60-61	0.011210	85,474	958	84,995	1,897,739	22.2
61-62	0.012106	84,516	1,023	84,005	1,812,743	21.4
62-63	0.013099	83,493	1,094	82,946	1,728,739	20.7
63-64	0.014140	82,399	1,165	81,817	1,645,792	20.0
64-65	0.015206	81,234	1,235	80,617	1,563,975	19.3

Table 18. Life table for non-Hispanic black females: United States, 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/18.xls.

Age	Probability of dying between ages x to $x + 1$	Number surviving to age x	Number dying between ages x to $x + 1$	Person-years lived between ages x to $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
65-66	0.016336	79,999	1,307	79,346	1,483,359	18.5
66-67	0.017435	78,692	1,372	78,006	1,404,013	17.8
67-68	0.018651	77,320	1,442	76,599	1,326,007	17.1
68-69	0.020008	75,878	1,518	75,119	1,249,408	16.5
69-70	0.021529	74,360	1,601	73,560	1,174,289	15.8
70-71	0.023216	72,759	1,689	71,914	1,100,729	15.1
71-72	0.025124	71,070	1,786	70,177	1,028,815	14.5
72-73	0.027325	69,284	1,893	68,338	958,638	13.8
73-74	0.029845	67,391	2,011	66,386	890,300	13.2
74-75	0.032672	65,380	2,136	64,312	823,914	12.6
75-76	0.035797	63,244	2,264	62,112	759,602	12.0
76-77	0.039058	60,980	2,382	59,789	697,491	11.4
77-78	0.042603	58,598	2,496	57,350	637,702	10.9
78-79	0.046454	56,102	2,606	54,799	580,352	10.3
79-80	0.050634	53,496	2,709	52,141	525,553	9.8
80-81	0.055169	50,787	2,802	49,386	473,412	9.3
81-82	0.060085	47,985	2,883	46,543	424,026	8.8
82-83	0.065408	45,102	2,950	43,627	377,482	8.4
83-84	0.071167	42,152	3,000	40,652	333,856	7.9
84-85	0.077392	39,152	3,030	37,637	293,204	7.5
85-86	0.084111	36,122	3,038	34,603	255,567	7.1
86-87	0.091356	33,084	3,022	31,572	220,964	6.7
87-88	0.099158	30,061	2,981	28,571	189,391	6.3
88-89	0.107547	27,080	2,912	25,624	160,821	5.9
89-90	0.116553	24,168	2,817	22,760	135,196	5.6
90-91	0.126208	21,351	2,695	20,004	112,437	5.3
91-92	0.136538	18,657	2,547	17,383	92,433	5.0
92-93	0.147571	16,109	2,377	14,921	75,050	4.7
93-94	0.159332	13,732	2,188	12,638	60,129	4.4
94-95	0.171840	11,544	1,984	10,552	47,491	4.1
95-96	0.185115	9,560	1,770	8,675	36,939	3.9
96-97	0.199168	7,791	1,552	7,015	28,264	3.6
97-98	0.214008	6,239	1,335	5,571	21,249	3.4
98-99	0.229636	4,904	1,126	4,341	15,678	3.2
99-100	0.246049	3,778	929	3,313	11,337	3.0
100 and over	1.00000	2,848	2,848	8,024	8,024	2.8

Table 19. Survivorship by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table19.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Number of survivors out of 100,000 born alive (%)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
All races												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,324	99,305	99,064	98,740	97,998	97,407	97,024	95,290	94,028	92,515	88,538	87,552
5	99,211	99,176	98,877	98,495	97,668	96,998	96,482	94,220	91,978	83,389	83,887	81,804
10	99,143	99,097	98,766	98,347	97,460	96,765	96,177	93,710	91,106	88,129	82,458	80,052
15	99,060	98,998	98,635	98,196	97,261	96,551	95,885	93,235	90,385	87,144	81,506	78,963
20	98,754	98,664	98,215	97,741	96,716	96,111	95,366	92,435	89,089	85,441	80,074	77,239
25	98,269	98,202	97,671	97,110	96,000	95,517	94,676	91,335	87,269	83,146	78,046	74,768
30	97,782	97,750	97,070	96,477	95,307	94,905	93,919	91,378	85,302	80,642	75,779	72,043
35	97,242	97,199	96,322	95,808	94,482	94,144	92,976	88,573	83,118	77,961	73,127	69,078
40	96,537	96,419	95,373	94,926	93,322	93,064	91,648	86,650	80,557	75,114	70,042	65,890
45	95,475	95,268	94,154	93,599	91,587	91,378	89,634	84,069	77,343	72,036	66,561	62,436
50	93,864	93,591	92,370	91,526	88,972	88,756	86,591	80,487	73,321	68,429	62,460	58,514
55	91,497	91,211	89,658	88,348	85,110	84,711	82,176	75,557	68,182	63,947	57,555	53,852
60	88,216	87,595	85,537	83,726	79,529	79,067	75,921	68,924	61,563	58,079	51,138	47,946
65	83,587	82,224	79,519	77,107	71,933	71,147	67,555	60,366	53,195	50,560	43,194	40,911
70	77,085	74,794	71,357	68,248	61,984	60,857	56,987	49,655	42,768	41,090	33,816	32,390
75	67,910	64,561	60,449	56,799	49,705	48,170	43,903	36,735	30,789	29,729	23,552	22,960
80	54,918	50,819	47,084	43,180	35,285	33,576	29,313	22,883	18,580	18,298	13,712	13,529
85	38,565	34,471	31,770	27,960	20,908	18,542	15,785	11,073	8,542	8,683	6,001	6,053
90	21,526	18,472	17,046	14,154	9,297	7,080	6,144	3,796	2,998	2,941	1,868	1,867
95	8,340	6,871	6,282	5,043	2,786	1,524	1,511	857	636	646	361	344
100	1,844	1,477	1,424	1,150	542	183	199	123	62	67	40	31
Male												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,261	99,239	98,961	98,607	97,755	97,087	96,661	94,762	93,440	91,745	87,505	86,426
5	99,137	99,095	98,754	98,333	97,395	96,643	96,077	93,624	91,294	88,505	82,718	80,548
10	99,063	99,008	98,627	98,160	97,151	96,375	95,726	93,054	90,346	87,184	81,249	78,775
15	98,966	98,890	98,464	97,972	96,904	96,107	95,366	92,508	89,561	86,156	80,261	77,661
20	98,537	98,426	97,854	97,316	96,126	95,491	94,695	91,617	88,220	84,440	78,792	75,984
25	97,824	97,746	97,049	96,361	95,040	94,631	93,791	90,385	86,359	82,252	76,675	73,472
30	97,141	97,112	96,166	95,430	94,072	93,826	92,861	89,009	84,346	79,890	74,378	70,747
35	96,423	96,382	95,091	94,501	92,997	92,889	91,760	87,371	82,075	77,514	71,614	67,752
40	95,535	95,384	93,761	93,345	91,541	91,572	90,207	85,246	79,357	74,432	68,297	64,447
45	94,223	93,931	92,139	91,649	89,369	89,492	87,819	82,336	75,882	71,244	64,518	60,849
50	92,246	91,800	89,865	89,007	86,070	86,199	84,158	78,254	71,518	67,553	60,118	56,736
55	89,299	88,862	86,492	84,936	81,139	81,039	78,781	72,627	65,981	62,965	54,970	51,939
60	85,253	84,478	81,378	79,012	73,958	73,887	71,246	65,142	58,909	56,917	48,343	45,895
65	79,726	78,083	73,971	70,646	64,318	64,177	61,566	55,776	50,154	49,218	40,264	38,736
70	72,132	69,350	64,107	59,681	52,296	52,244	49,950	44,588	39,516	39,668	31,023	30,217
75	61,685	57,572	51,385	46,272	38,797	38,950	36,756	31,864	27,718	28,316	21,213	21,076
80	47,627	42,683	36,749	31,810	24,921	25,300	25,237	18,995	16,172	17,128	11,942	12,084
85	31,177	26,473	21,815	18,020	13,168	12,845	11,750	8,693	7,107	7,920	5,059	5,179
90	15,684	12,447	9,878	7,732	5,107	4,609	4,197	2,787	2,283	2,527	1,502	1,508
95	5,238	3,847	2,927	2,279	1,326	970	955	586	451	556	289	262
100	946	643	529	423	222	117	121	78	40	62	33	22
Female												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,390	99,375	99,172	98,880	98,254	97,744	97,406	95,848	94,728	93,383	89,623	88,733
5	99,288	99,261	99,006	98,666	97,955	97,371	96,908	94,848	92,789	90,380	85,117	83,119
10	99,227	99,190	98,911	98,544	97,784	97,173	96,652	94,402	92,008	89,186	83,728	81,390
15	99,159	99,111	98,814	98,432	97,636	97,016	96,431	94,000	91,364	88,247	82,813	80,307
20	98,982	98,915	98,597	98,184	97,331	96,756	96,066	93,293	90,116	86,556	81,418	78,555
25	98,742	98,682	98,325	97,883	96,966	96,418	95,583	92,322	88,328	84,135	79,481	76,119
30	98,463	98,418	98,013	97,551	96,544	95,996	94,933	91,182	86,398	81,463	77,247	73,394
35	98,108	98,052	97,596	97,140	95,966	95,409	94,206	89,810	84,304	78,713	74,719	70,463
40	97,592	97,492	97,033	96,531	95,097	94,560	93,101	88,092	81,927	75,907	71,894	67,407
45	96,784	96,645	96,222	95,570	93,793	93,265	91,469	85,856	79,041	72,954	68,755	64,121
50	95,542	95,420	94,932	94,060	91,852	91,327	89,075	82,828	75,456	69,452	65,001	60,415

See footnotes at end of table.

Table 19. Survivorship by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table19.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Number of survivors out of 100,000 born alive (%)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Female—Con.												
55.	93,753	93,597	92,881	91,760	89,066	88,451	85,694	78,708	70,832	65,099	60,392	55,908
60.	91,234	90,739	89,742	88,414	85,139	84,430	80,890	73,093	64,795	59,438	54,226	50,155
65.	87,494	86,367	85,075	83,520	79,698	78,462	74,119	65,523	56,924	52,126	46,438	43,246
70.	82,030	80,158	78,522	76,720	71,955	70,100	64,873	55,449	46,774	42,741	36,916	34,721
75.	73,973	71,257	69,287	67,186	61,107	58,394	52,111	42,425	34,600	31,344	26,155	24,994
80.	61,848	58,411	56,986	54,372	46,445	43,063	36,486	27,524	21,578	19,613	15,682	15,129
85.	45,436	41,798	41,115	37,772	29,538	25,269	20,668	13,972	10,322	9,515	7,051	7,063
90.	26,842	23,918	23,666	20,578	14,160	10,056	8,548	5,044	3,656	3,314	2,269	2,306
95.	11,078	9,553	9,346	7,862	4,565	2,193	2,207	1,195	807	728	441	452
100.	2,587	2,181	2,251	1,927	954	264	298	179	82	72	49	43
White												
0.	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1.	99,436	99,429	99,233	98,898	98,224	97,714	97,278	95,685	94,392	92,780	88,709	87,762
5.	99,333	99,312	99,068	98,675	97,930	97,353	96,790	94,713	92,466	89,771	84,147	82,071
10.	99,269	99,239	98,966	98,536	97,733	97,131	96,502	94,228	91,627	88,536	82,734	80,371
15.	99,192	99,146	98,843	98,391	97,546	96,928	96,228	93,792	90,982	87,633	81,816	79,344
20.	98,902	98,826	98,455	97,939	97,036	96,508	95,763	93,117	89,933	86,159	80,407	77,998
25.	98,443	98,405	97,972	97,340	96,406	95,965	95,169	92,213	88,454	84,106	78,392	75,202
30.	97,986	98,000	97,451	96,774	95,824	95,440	94,536	91,185	86,836	81,787	76,167	72,317
35.	97,481	97,504	96,810	96,192	95,152	94,798	93,750	89,941	85,004	79,277	73,568	69,522
40.	96,822	96,796	96,000	95,427	94,190	93,870	92,616	88,318	82,803	76,642	70,525	66,082
45.	95,823	95,755	94,932	94,257	92,681	92,374	90,847	86,069	79,989	73,705	67,090	62,920
50.	94,308	94,233	93,326	92,384	90,306	89,958	88,110	82,833	76,340	70,250	62,994	58,647
55.	92,088	92,032	90,833	89,427	86,688	86,173	84,027	78,218	71,551	65,875	58,163	54,450
60.	88,982	88,614	86,943	85,031	81,323	80,811	78,066	71,785	65,100	60,013	51,822	48,288
65.	84,505	83,423	81,123	78,585	73,889	73,102	69,850	63,201	56,655	52,411	43,904	41,505
70.	78,111	76,132	73,106	69,801	63,991	62,834	59,189	52,165	45,841	42,736	34,484	32,902
75.	68,972	65,946	62,175	58,299	51,586	49,895	45,688	38,610	33,406	31,086	24,151	23,356
80.	55,893	52,100	48,583	44,409	36,659	34,697	30,438	23,976	20,260	19,149	14,100	13,794
85.	39,258	35,421	32,850	28,768	21,578	19,017	16,239	11,483	9,325	9,078	6,178	6,192
90.	21,806	18,943	17,571	14,471	9,433	7,149	6,201	3,819	3,066	2,991	1,918	1,919
95.	8,316	6,963	6,416	5,067	2,743	1,521	1,500	801	636	643	364	355
100.	1,773	1,453	1,423	1,105	487	183	196	98	58	62	38	31
White male												
0.	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1.	99,382	99,373	99,138	98,769	97,994	97,408	96,931	95,188	93,768	91,975	87,674	86,655
5.	99,270	99,243	98,956	98,519	97,671	97,015	96,403	94,150	91,738	88,842	82,972	80,864
10.	99,200	99,163	98,839	98,357	97,441	96,758	96,069	93,601	90,810	87,530	81,519	79,109
15.	99,111	99,052	98,686	98,176	97,208	96,503	95,728	93,089	90,074	86,546	80,549	78,037
20.	98,716	98,615	98,134	97,525	96,480	95,908	95,104	92,293	88,904	84,997	79,116	76,376
25.	98,046	98,002	97,430	96,616	95,524	95,106	94,294	91,241	87,371	83,061	77,047	73,907
30.	97,408	97,434	96,662	95,783	94,716	94,401	93,489	90,092	85,707	80,888	74,810	71,219
35.	96,738	96,772	95,731	94,980	93,843	93,589	92,543	88,713	83,812	78,441	72,108	68,245
40.	95,905	95,855	94,588	93,984	92,631	92,427	91,173	86,880	81,457	75,733	68,848	64,954
45.	94,663	94,522	93,167	92,494	90,725	90,533	89,002	84,285	78,345	72,696	65,115	61,369
50.	92,785	92,573	91,124	90,105	87,690	87,424	85,601	80,521	74,288	69,107	60,741	57,274
55.	90,012	89,854	88,022	86,303	83,001	82,463	80,496	75,156	68,981	64,574	55,622	52,491
60.	86,188	85,710	83,182	80,625	75,969	75,485	73,172	67,787	61,933	58,498	48,987	46,452
65.	80,852	79,515	75,962	72,393	66,343	65,834	63,541	58,305	52,964	50,663	40,862	39,245
70.	73,390	70,912	66,181	61,384	54,138	53,825	51,735	46,739	41,880	40,873	31,527	30,640
75.	62,991	59,139	53,308	47,712	40,324	40,207	38,104	33,404	29,471	29,205	21,585	21,387
80.	48,785	44,043	38,245	32,788	25,885	25,993	24,005	19,860	17,221	17,655	12,160	12,266
85.	31,945	27,376	22,720	18,538	13,527	13,065	12,015	9,013	7,572	8,154	5,145	5,252
90.	15,960	12,817	10,214	7,891	5,125	4,600	4,209	2,812	2,356	2,568	1,523	1,523
95.	5,214	3,892	2,988	2,279	1,274	956	942	552	461	556	289	263
100.	896	624	523	404	189	115	118	65	40	61	31	22

See footnotes at end of table.

Table 19. Survivorship by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table19.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Number of survivors out of 100,000 born alive (%)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
White female												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	99,492	99,488	99,333	99,035	98,468	98,036	97,645	96,211	95,037	93,608	89,774	88,939
5	99,400	99,385	99,187	98,841	98,203	97,709	97,199	95,309	93,216	90,721	85,349	83,426
10	99,341	99,319	99,099	98,725	98,042	97,525	96,960	94,890	92,466	89,564	83,979	81,723
15	99,277	99,245	99,007	98,618	97,902	97,375	96,756	94,534	91,894	88,712	83,093	80,680
20	99,099	99,049	98,795	98,374	97,618	97,135	96,454	93,984	90,939	87,281	81,750	78,978
25	98,868	98,835	98,547	98,093	97,299	96,844	96,072	93,228	89,524	85,163	79,865	76,588
30	98,607	98,601	98,283	97,802	96,945	96,499	95,605	92,320	87,972	82,740	77,762	73,887
35	98,278	98,282	97,939	97,445	96,474	96,026	94,977	91,211	86,248	80,206	75,200	70,971
40	97,804	97,789	97,472	96,913	95,762	95,326	94,080	89,805	84,256	77,624	72,425	67,935
45	97,058	97,047	96,768	96,065	94,649	94,228	92,725	87,920	81,780	74,871	69,341	64,677
50	95,914	95,958	95,608	94,710	92,924	92,522	90,685	85,267	78,572	71,547	65,629	61,005
55	94,257	94,284	93,730	92,594	90,383	89,967	87,699	81,520	74,321	67,323	61,053	56,509
60	91,881	91,591	90,789	89,451	86,726	86,339	83,279	76,200	68,462	61,704	54,900	50,752
65	88,266	87,391	86,339	84,764	81,579	80,739	76,773	68,701	60,499	54,299	47,086	43,806
70	82,904	81,346	79,984	78,139	74,101	72,507	67,545	58,363	49,932	44,638	37,482	35,206
75	74,898	72,546	70,834	68,712	63,290	60,461	54,397	44,685	37,024	32,777	26,569	25,362
80	62,732	59,681	58,454	55,770	48,182	44,676	38,026	28,882	23,053	20,492	15,929	15,349
85	46,098	42,820	42,274	38,774	30,490	26,046	21,348	14,487	10,937	9,909	7,152	7,149
90	27,122	24,475	24,270	20,996	14,406	10,219	8,662	5,061	3,719	3,372	2,291	2,322
95	11,037	9,673	9,495	7,900	4,526	2,203	2,200	1,109	797	721	434	448
100	2,492	2,145	2,239	1,858	872	265	294	139	74	63	44	41
Black¹												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	98,674	98,578	98,187	97,885	96,731	95,732	95,407	92,584	92,035	90,379	79,784	76,609
5	98,508	98,382	97,884	97,522	96,207	95,051	94,482	90,983	89,303	86,174	70,691	66,222
10	98,419	98,271	97,720	97,322	95,928	94,745	94,060	90,339	88,258	84,690	68,437	63,410
15	98,304	98,139	97,539	97,134	95,661	94,460	93,646	89,591	87,156	83,180	66,410	61,060
20	97,895	97,701	96,925	96,652	94,887	93,880	92,738	87,839	84,386	79,641	63,165	57,931
25	97,221	96,944	95,972	95,804	93,513	92,925	91,321	85,210	80,320	74,973	59,608	54,512
30	96,467	96,140	94,809	94,680	91,934	91,699	89,584	82,194	75,962	70,492	56,112	51,287
35	95,580	95,160	93,260	93,288	89,977	90,046	87,402	78,683	71,141	65,865	52,125	48,007
40	94,422	93,801	91,239	91,439	87,304	87,766	84,478	74,466	65,974	61,244	47,866	44,518
45	92,768	91,754	88,689	88,834	83,700	84,501	80,507	69,284	59,827	56,442	43,054	40,628
50	90,247	88,726	85,285	85,044	78,938	80,172	74,976	62,702	53,141	51,422	37,800	36,103
55	86,422	84,588	80,635	79,816	72,826	73,893	67,660	54,846	45,558	45,803	32,233	31,404
60	81,288	78,869	74,335	72,913	65,250	65,795	58,593	46,318	37,654	39,418	26,046	25,698
65	74,590	71,448	66,154	64,391	56,102	56,038	48,649	37,838	30,015	32,738	19,806	20,474
70	66,212	62,126	56,192	54,617	45,785	45,434	38,616	29,654	22,505	25,585	14,021	14,960
75	55,796	50,804	44,872	43,274	34,262	34,531	28,968	21,798	15,546	18,011	9,139	9,956
80	43,044	37,828	33,149	31,711	23,710	24,815	20,003	14,408	9,589	11,376	5,158	5,750
85	29,174	24,589	21,352	19,939	15,044	15,337	12,433	8,326	4,900	5,794	2,414	2,782
90	16,345	13,157	11,646	10,713	8,087	7,195	6,394	4,077	2,044	2,317	913	1,054
95	6,950	5,349	4,729	4,463	3,252	1,777	2,010	1,557	638	689	324	296
100	1,998	1,485	1,376	1,360	1,036	214	301	399	120	129	77	57
Black male¹												
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	98,549	98,437	98,023	97,703	96,394	95,301	94,911	91,772	91,268	89,499	78,065	74,674
5	98,371	98,219	97,688	97,300	95,826	94,570	93,921	90,082	88,412	85,195	68,589	64,385
10	98,271	98,093	97,501	97,061	95,497	94,234	93,453	89,393	87,311	83,768	66,377	61,730
15	98,132	97,930	97,268	96,826	95,161	93,874	92,965	88,610	86,152	82,332	64,478	59,667
20	97,505	97,274	96,301	96,132	94,053	93,108	91,941	86,968	83,621	79,057	61,426	56,733
25	96,473	96,099	94,809	94,827	91,904	91,825	90,285	84,227	79,516	74,540	57,736	53,285
30	95,383	94,934	93,070	93,125	89,584	90,270	88,327	80,979	75,083	70,344	54,073	49,867
35	94,166	93,631	90,827	91,080	86,885	88,331	85,940	77,221	70,049	65,873	49,865	46,541
40	92,701	91,930	87,948	88,490	83,441	85,744	82,832	72,780	64,710	61,353	45,414	42,989
45	90,671	89,411	84,467	84,997	78,976	82,075	78,686	67,346	58,432	56,589	40,563	39,230
50	87,635	85,596	79,984	80,065	73,282	77,239	72,891	60,495	51,748	51,880	35,427	34,766

See footnotes at end of table.

Table 19. Survivorship by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table19.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Number of survivors out of 100,000 born alive (%)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Black male¹—Con.												
55.	82,879	80,417	74,095	73,413	66,101	70,351	65,122	52,426	44,436	46,581	29,754	29,987
60.	76,405	73,369	66,334	64,980	57,457	61,669	55,535	43,833	36,790	40,506	23,750	24,194
65.	68,181	64,588	56,795	55,061	47,485	51,392	45,198	35,371	29,314	34,042	17,806	19,015
70.	58,290	53,926	45,690	44,213	36,925	39,914	35,018	27,236	21,741	26,923	12,295	13,829
75.	46,619	41,441	33,755	32,717	25,921	29,064	25,472	19,456	14,419	18,854	7,494	8,892
80.	33,507	28,326	22,549	22,017	16,560	19,994	16,904	12,186	8,239	11,615	3,894	4,831
85.	20,744	16,433	12,709	12,383	9,648	11,620	9,898	6,444	3,660	5,605	1,747	2,030
90.	10,388	7,579	5,972	5,708	4,696	5,174	4,642	2,836	1,246	2,040	595	634
95.	3,865	2,549	1,971	2,009	1,721	1,240	1,342	961	307	552	189	137
100.	957	560	466	513	489	149	192	209	41	77	40	18
Black female¹												
0.	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1.	98,803	98,723	98,356	98,073	97,076	96,172	95,913	93,416	92,796	91,251	81,493	78,525
5.	98,650	98,550	98,087	97,751	96,598	95,543	95,055	91,906	90,185	87,149	72,768	68,056
10.	98,573	98,455	97,946	97,590	96,369	95,265	94,679	91,308	89,201	85,607	70,508	65,111
15.	98,483	98,354	97,818	97,450	96,172	95,057	94,343	90,594	88,088	83,954	68,218	62,384
20.	98,299	98,141	97,566	97,180	95,729	94,660	93,544	88,736	85,078	80,154	64,764	59,053
25.	97,996	97,784	97,140	96,754	95,035	94,005	92,336	86,198	81,067	75,359	61,430	55,795
30.	97,572	97,313	96,514	96,150	94,114	93,070	90,799	83,384	76,816	70,633	58,281	52,773
35.	96,990	96,630	95,599	95,338	92,807	91,670	88,805	80,092	72,192	65,857	54,595	49,567
40.	96,116	95,585	94,364	94,137	90,817	89,676	86,052	76,084	67,271	61,130	50,568	46,146
45.	94,803	93,970	92,676	92,322	88,001	86,793	82,257	71,157	61,365	56,230	45,947	42,279
50.	92,750	91,661	90,277	89,563	84,168	82,979	77,007	64,885	54,920	50,780	40,886	37,681
55.	89,763	88,478	86,793	85,653	79,177	77,362	70,196	57,314	47,074	44,742	35,415	33,124
60.	85,832	83,963	81,886	80,293	72,820	69,941	61,758	48,928	38,761	37,954	28,908	27,524
65.	80,494	77,781	75,031	73,266	64,716	60,825	52,358	40,504	30,852	31,044	22,302	21,995
70.	73,404	69,634	66,278	64,729	54,873	51,274	42,612	32,354	23,341	24,107	15,871	16,140
75.	64,002	59,239	55,684	53,831	43,193	40,540	32,981	24,502	16,576	17,216	10,657	11,066
80.	51,565	46,358	43,622	41,686	31,756	30,315	23,712	17,039	10,822	11,151	6,324	6,708
85.	36,809	31,987	30,089	28,004	21,358	19,744	15,550	10,622	6,033	5,972	3,029	3,567
90.	21,831	18,309	17,536	16,260	12,210	9,675	8,590	5,652	2,774	2,579	1,206	1,492
95.	9,793	7,972	7,687	7,312	5,217	2,438	2,875	2,345	941	818	448	462
100.	2,912	2,346	2,364	2,398	1,803	293	445	659	193	179	112	97

¹For 1939–1941 and 1949–1951, data shown are for the entire nonwhite population. During these periods, life tables were not constructed for the black population. See "Technical Notes" section.

Table 20. Life expectancy by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table20.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Average number of years of life remaining (e_x)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
All races												
0	77.9	76.83	75.37	73.88	70.75	69.89	68.07	63.62	59.20	56.40	51.49	49.24
1	77.5	76.37	75.08	73.82	71.19	70.75	69.16	65.76	61.94	59.94	57.11	55.20
5	73.6	72.47	71.22	70.00	67.43	67.04	65.54	62.49	59.29	57.99	56.21	54.98
10	68.6	67.52	66.29	65.10	62.57	62.19	60.74	57.82	54.84	53.79	52.15	51.14
15	63.7	62.59	61.38	60.19	57.69	57.33	55.91	53.10	50.25	49.37	47.73	46.81
20	58.8	57.79	56.63	55.46	53.00	52.58	51.20	48.54	45.94	45.30	43.53	42.79
25	54.1	53.05	51.93	50.81	48.37	47.89	46.56	44.09	41.85	41.47	39.60	39.12
30	49.4	48.28	47.23	46.12	43.71	43.18	41.91	39.67	37.75	37.68	35.70	35.51
35	44.6	43.54	42.58	41.43	39.07	38.51	37.31	35.30	33.68	33.89	31.90	31.92
40	39.9	38.87	37.98	36.79	34.52	33.92	32.81	31.03	29.67	30.08	28.20	28.34
45	35.4	34.31	33.44	32.27	30.12	29.50	28.49	26.90	25.79	26.25	24.54	24.77
50	30.9	29.88	29.03	27.94	25.93	25.29	24.40	22.98	22.06	22.50	20.98	21.26
55	26.7	25.59	24.83	23.85	21.99	21.37	20.57	19.31	18.53	18.90	17.55	17.88
60	22.5	21.54	20.90	20.02	18.34	17.71	17.04	15.91	15.24	15.54	14.42	14.76
65	18.6	17.77	17.28	16.51	15.00	14.39	13.83	12.80	12.23	12.47	11.60	11.86
70	15.0	14.27	13.96	13.32	12.00	11.38	10.92	10.00	9.58	9.74	9.11	9.30
75	11.7	11.12	11.00	10.48	9.32	8.71	8.40	7.62	7.32	7.49	6.99	7.08
80	8.8	8.42	8.40	7.98	7.10	6.39	6.34	5.73	5.50	5.63	5.25	5.30
85	6.5	6.22	6.23	5.96	5.28	4.58	4.69	4.31	4.19	4.21	4.00	3.96
90	4.6	4.49	4.50	4.43	3.94	3.22	3.44	3.30	3.15	3.22	3.03	2.95
95	3.2	3.19	3.29	3.34	3.06	2.43	2.54	2.61	2.26	2.32	2.35	2.18
100	2.3	2.27	2.46	2.73	2.62	1.91	1.92	2.13	1.51	1.53	1.85	1.58
Male												
0	75.4	74.10	71.83	70.11	67.04	66.80	65.47	61.60	57.71	55.50	49.86	47.88
1	74.9	73.66	71.58	70.10	67.58	67.80	66.73	64.00	60.75	59.47	55.95	54.35
5	71.0	69.77	67.73	66.29	63.82	64.10	63.12	60.76	58.14	57.60	55.11	54.22
10	66.1	64.83	62.81	61.41	58.98	59.27	58.35	56.12	53.75	53.44	51.07	50.39
15	61.1	59.90	57.91	56.52	54.12	54.43	53.56	51.43	49.18	49.05	46.66	46.06
20	56.4	55.17	53.25	51.88	49.54	49.77	48.92	46.91	44.88	44.99	42.48	42.03
25	51.8	50.54	48.67	47.37	45.07	45.19	44.36	42.51	40.79	41.11	38.59	38.38
30	47.1	45.85	44.10	42.81	40.51	40.56	39.78	38.13	36.71	37.26	34.70	34.76
35	42.5	41.18	39.57	38.20	35.95	35.94	35.23	33.79	32.65	33.43	30.94	31.19
40	37.8	36.58	35.09	33.64	31.48	31.42	30.79	29.57	28.68	29.63	27.32	27.65
45	33.3	32.10	30.66	29.22	27.18	27.09	26.55	25.52	24.87	25.84	23.77	24.14
50	29.0	27.79	26.37	25.00	23.12	23.02	22.59	21.72	21.25	22.11	20.32	20.70
55	24.9	23.62	22.30	21.08	19.36	19.32	18.96	18.20	17.79	18.53	16.98	17.38
60	20.9	19.71	18.53	17.46	15.99	15.94	15.68	14.99	14.62	15.22	13.95	14.33
65	17.2	16.11	15.12	14.21	12.99	12.95	12.74	12.07	11.72	12.20	11.24	11.50
70	13.7	12.80	12.05	11.35	10.39	10.33	10.11	9.46	9.18	9.52	8.83	9.02
75	10.6	9.89	9.39	8.90	8.13	7.99	7.83	7.22	7.02	7.31	6.75	6.84
80	7.9	7.44	7.12	6.80	6.27	5.95	5.94	5.44	5.27	5.49	5.10	5.11
85	5.8	5.47	5.31	5.13	4.73	4.39	4.41	4.11	4.02	4.10	3.90	3.82
90	4.1	3.95	3.89	3.89	3.60	3.18	3.30	3.17	3.06	3.21	3.01	2.86
95	2.9	2.82	2.92	2.98	2.82	2.43	2.49	2.52	2.21	2.38	2.36	2.13
100	2.1	2.03	2.25	2.49	2.43	1.91	1.92	2.05	1.50	1.58	1.81	1.55
Female												
0	80.4	79.45	78.81	77.62	74.64	73.24	70.96	65.89	60.90	57.40	53.24	50.70
1	79.9	78.95	78.47	77.50	74.97	73.93	71.84	67.73	65.37	60.45	58.37	56.10
5	76.0	75.04	74.60	73.67	71.19	70.21	68.21	64.43	60.66	58.41	57.39	55.80
10	71.0	70.09	69.67	68.75	66.31	65.35	63.38	59.73	56.16	54.16	53.31	51.94
15	66.1	65.15	64.73	63.83	61.41	60.45	58.52	54.97	51.54	49.71	48.87	47.60
20	61.2	60.27	59.87	58.98	56.59	55.60	53.73	50.37	47.21	45.63	44.66	43.60
25	56.3	55.41	55.03	54.16	51.80	50.79	48.99	45.87	43.11	41.86	40.69	39.92
30	51.5	50.55	50.19	49.33	47.01	46.00	44.28	41.41	39.02	38.15	36.79	36.30
35	46.7	45.73	45.40	44.53	42.28	41.27	39.63	37.01	34.92	34.40	32.95	32.71
40	41.9	40.98	40.65	39.80	37.64	36.61	35.06	32.68	30.86	30.58	29.15	29.08
45	37.2	36.31	35.97	35.17	33.13	32.09	30.64	28.46	26.89	26.71	25.36	25.44
50	32.7	31.74	31.42	30.69	28.77	27.71	26.40	24.40	23.05	22.92	21.67	21.84

See footnotes at end of table.

Table 20. Life expectancy by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table20.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Average number of years of life remaining (e_x)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Female—Con.												
55.	28.2	27.31	27.05	26.39	24.59	23.53	22.33	20.54	19.38	19.28	18.13	18.39
60.	23.9	23.09	22.90	22.29	20.60	19.52	18.50	16.92	15.94	15.87	14.90	15.21
65.	19.9	19.12	19.02	18.44	16.83	15.80	14.95	13.57	12.78	12.73	11.96	12.22
70.	16.0	15.40	15.38	14.84	13.35	12.37	11.71	10.56	9.99	9.96	9.38	9.59
75.	12.5	11.99	12.08	11.58	10.26	9.33	8.94	8.01	7.61	7.65	7.20	7.34
80.	9.4	9.05	9.13	8.69	7.68	6.72	6.67	5.99	5.70	5.75	5.37	5.51
85.	6.8	6.62	6.66	6.38	5.63	4.71	4.90	4.47	4.32	4.30	4.08	4.12
90.	4.8	4.71	4.73	4.66	4.14	3.25	3.54	3.39	3.24	3.23	3.05	3.04
95.	3.3	3.29	3.40	3.48	3.18	2.43	2.57	2.67	2.30	2.27	2.34	2.24
100.	2.3	2.29	2.52	2.81	2.69	1.91	1.93	2.17	1.52	1.48	1.91	1.61
White												
0.	78.4	77.41	76.13	74.53	71.62	70.73	69.02	64.92	60.86	57.42	51.90	49.64
1.	77.8	76.85	75.72	74.35	71.91	71.38	69.95	66.84	63.46	60.87	57.46	55.47
5.	73.9	72.94	71.84	70.52	68.12	67.64	66.29	63.52	60.75	58.86	56.51	55.18
10.	68.9	67.99	66.92	65.62	63.26	62.79	61.48	58.83	56.29	54.65	52.43	51.34
15.	64.0	63.05	61.99	60.71	58.37	57.92	56.65	54.09	51.69	50.21	48.01	47.01
20.	59.2	58.25	57.23	55.98	53.66	53.16	51.91	49.47	47.28	46.04	43.77	43.17
25.	54.4	53.48	52.50	51.30	49.00	48.44	47.22	44.92	43.02	42.07	39.79	39.26
30.	49.7	48.70	47.76	46.59	44.28	43.69	42.52	40.40	38.76	38.17	35.86	35.51
35.	44.9	43.93	43.06	41.86	39.58	38.97	37.86	35.93	34.50	34.27	32.03	32.01
40.	40.2	39.23	38.41	37.17	34.95	34.33	33.29	31.54	30.33	30.38	28.29	28.28
45.	35.6	34.63	33.81	32.60	30.48	29.84	28.88	27.29	26.29	26.45	24.60	24.82
50.	31.1	30.15	29.34	28.21	26.21	25.57	24.70	23.26	22.42	22.64	21.01	21.18
55.	26.8	25.80	25.08	24.05	22.19	21.58	20.77	19.47	18.75	18.97	17.57	17.91
60.	22.6	21.70	21.08	20.16	18.48	17.84	17.15	15.98	15.37	15.57	14.43	14.73
65.	18.7	17.88	17.40	16.59	15.08	14.44	13.86	12.80	12.28	12.47	11.60	11.87
70.	15.0	14.34	14.02	13.35	12.01	11.37	10.89	9.96	9.58	9.72	9.10	9.31
75.	11.7	11.15	11.03	10.47	9.27	8.65	8.34	7.55	7.30	7.47	6.98	7.08
80.	8.8	8.42	8.39	7.95	7.01	6.33	6.27	5.64	5.45	5.59	5.22	5.30
85.	6.4	6.19	6.20	5.90	5.19	4.53	4.62	4.20	4.12	4.15	3.97	3.95
90.	4.6	4.44	4.46	4.36	3.84	3.20	3.41	3.16	3.10	3.17	3.00	2.93
95.	3.2	3.14	3.25	3.25	2.92	2.43	2.53	2.45	2.22	2.28	2.29	2.16
100.	2.2	2.22	2.43	2.62	2.41	1.91	1.92	1.95	1.48	1.50	1.71	1.56
White male												
0.	75.9	74.74	72.72	70.82	67.94	67.55	66.31	62.81	59.12	56.34	50.23	48.23
1.	75.4	74.21	72.35	70.70	68.33	68.34	67.41	64.98	62.04	60.24	56.26	54.61
5.	71.4	70.31	68.48	66.87	64.55	64.61	63.77	61.68	59.38	58.31	55.37	54.43
10.	66.5	65.36	63.55	61.98	59.69	59.78	58.98	57.03	54.96	54.15	51.32	50.59
15.	61.6	60.43	58.65	57.09	54.83	54.93	54.18	52.33	50.39	49.74	46.91	46.25
20.	56.8	55.69	53.96	52.45	50.22	50.25	49.52	47.76	46.02	45.60	42.71	42.19
25.	52.2	51.02	49.33	47.92	45.70	45.65	44.93	43.28	41.78	41.60	38.79	38.52
30.	47.5	46.30	44.71	43.31	41.07	40.97	40.29	38.80	37.54	37.65	34.87	34.88
35.	42.8	41.60	40.12	38.66	36.43	36.31	35.68	34.36	33.33	33.74	31.08	31.29
40.	38.1	36.98	35.57	34.04	31.87	31.73	31.17	30.03	29.22	29.86	27.43	27.74
45.	33.6	32.46	31.07	29.55	27.48	27.34	26.87	25.87	25.28	26.00	23.86	24.21
50.	29.2	28.09	26.71	25.26	23.34	23.22	22.83	21.96	21.51	22.22	20.39	20.76
55.	25.1	23.86	22.56	21.25	19.51	19.45	19.11	18.34	17.97	18.59	17.03	17.42
60.	21.0	19.88	18.71	17.56	16.07	16.01	15.76	15.05	14.72	15.25	13.98	14.35
65.	17.3	16.22	15.24	14.26	13.02	12.97	12.75	12.07	11.77	12.21	11.25	11.51
70.	13.8	12.87	12.11	11.35	10.38	10.29	10.07	9.42	9.20	9.51	8.83	9.03
75.	10.6	9.92	9.40	8.87	8.06	7.92	7.77	7.17	7.02	7.30	6.75	6.84
80.	7.9	7.43	7.11	6.76	6.18	5.89	5.88	5.38	5.26	5.47	5.09	5.10
85.	5.7	5.43	5.28	5.09	4.63	4.34	4.35	4.02	3.99	4.06	3.88	3.81
90.	4.1	3.90	3.85	3.83	3.49	3.16	3.27	3.06	3.03	3.18	2.99	2.85
95.	2.9	2.77	2.88	2.91	2.67	2.43	2.48	2.40	2.19	2.36	2.31	2.12
100.	2.0	1.98	2.21	2.41	2.20	1.91	1.92	1.96	1.49	1.58	1.68	1.55

See footnotes at end of table.

Table 20. Life expectancy by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table20.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Average number of years of life remaining (e_x)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
White female												
0	80.8	79.97	79.45	78.22	75.49	74.19	72.03	67.29	62.67	58.53	53.62	51.08
1	80.2	79.38	78.99	77.98	75.66	74.68	72.77	68.93	64.93	61.51	58.69	56.39
5	76.3	75.46	75.10	74.13	71.86	70.92	69.09	65.57	62.17	59.43	57.67	56.03
10	71.3	70.51	70.16	69.21	66.97	66.05	64.26	60.85	57.65	55.17	53.57	52.15
15	66.3	65.56	65.23	64.29	62.07	61.15	59.39	56.07	53.00	50.67	49.12	47.79
20	61.5	60.69	60.36	59.44	57.24	56.29	54.56	51.38	48.52	46.46	44.88	43.77
25	56.6	55.81	55.51	54.60	52.42	51.45	49.77	46.78	44.25	42.55	40.88	40.05
30	51.7	50.94	50.65	49.76	47.60	46.63	45.00	42.21	39.99	38.72	36.96	36.42
35	46.9	46.10	45.82	44.93	42.82	41.84	40.28	37.70	35.73	34.86	33.09	32.82
40	42.1	41.31	41.03	40.16	38.12	37.13	35.64	33.25	31.52	30.94	29.26	29.17
45	37.4	36.61	36.30	35.49	33.54	32.53	31.12	28.90	27.39	26.98	25.45	25.51
50	32.8	31.99	31.71	30.96	29.11	28.08	26.76	24.72	23.41	23.12	21.74	21.89
55	28.4	27.52	27.29	26.61	24.85	23.81	22.58	20.73	19.60	19.40	18.18	18.43
60	24.0	23.25	23.09	22.45	20.79	19.69	18.64	17.00	16.05	15.93	14.92	15.23
65	19.9	19.23	19.14	18.55	16.93	15.88	15.00	13.56	12.81	12.75	11.97	12.23
70	16.0	15.47	15.46	14.89	13.37	12.38	11.68	10.50	9.98	9.94	9.38	9.59
75	12.4	12.02	12.11	11.58	10.21	9.28	8.87	7.92	7.56	7.62	7.20	7.33
80	9.3	9.04	9.12	8.65	7.59	6.67	6.59	5.88	5.63	5.70	5.35	5.50
85	6.8	6.59	6.62	6.32	5.54	4.66	4.83	4.34	4.24	4.24	4.06	4.10
90	4.8	4.67	4.69	4.59	4.05	3.23	3.51	3.24	3.17	3.16	3.00	3.02
95	3.3	3.24	3.36	3.39	3.04	2.43	2.56	2.47	2.24	2.20	2.27	2.21
100	2.2	2.24	2.49	2.70	2.49	1.91	1.92	1.95	1.48	1.42	1.74	1.58
Black¹												
0	73.6	71.74	69.16	68.52	64.11	63.91	60.73	53.85	48.53	47.03	35.87	33.80
1	73.6	71.78	69.43	68.99	65.27	65.75	62.65	57.15	51.71	51.01	43.84	43.00
5	69.7	67.92	65.64	65.25	61.62	62.21	59.25	54.13	49.25	49.44	45.34	45.55
10	64.7	62.99	60.75	60.38	56.79	57.41	54.50	49.50	44.80	45.26	41.74	42.46
15	59.8	58.07	55.86	55.49	51.94	52.57	49.73	44.89	40.37	41.02	38.02	39.04
20	55.0	53.32	51.19	50.75	47.34	47.88	45.19	40.73	36.62	37.72	34.86	36.03
25	50.4	48.71	46.67	46.18	43.00	43.35	40.85	36.91	33.32	34.91	31.72	33.04
30	45.8	44.10	42.22	41.69	38.70	38.89	36.59	33.17	30.07	31.98	28.43	29.96
35	41.2	39.53	37.87	37.28	34.48	34.56	32.44	29.53	26.94	29.07	25.39	26.82
40	36.7	35.06	33.65	32.98	30.46	30.39	28.48	26.06	23.82	26.07	22.41	23.73
45	32.3	30.79	29.55	28.87	26.65	26.46	24.75	22.82	20.97	23.17	19.58	20.67
50	28.1	26.75	25.62	25.03	23.11	22.74	21.38	19.94	18.22	20.17	16.84	17.95
55	24.2	22.93	21.95	21.50	19.83	19.45	18.41	17.43	15.80	17.33	14.33	15.23
60	20.6	19.40	18.59	18.29	16.83	16.53	15.87	15.18	13.62	14.72	12.16	13.06
65	17.2	16.14	15.56	15.37	14.16	13.96	13.59	13.02	11.49	12.22	10.22	10.87
70	14.0	13.18	12.87	12.67	11.77	11.63	11.48	10.93	9.54	9.90	8.59	8.96
75	11.2	10.54	10.48	10.32	9.89	9.52	9.48	8.97	7.84	8.00	7.08	7.24
80	8.7	8.29	8.30	8.17	8.20	7.28	7.62	7.31	6.19	6.22	5.80	5.79
85	6.7	6.41	6.51	6.54	6.54	5.27	5.79	5.91	4.92	4.88	4.80	4.56
90	5.1	4.90	4.94	5.13	5.09	3.48	3.97	4.64	3.83	3.84	4.26	3.60
95	3.8	3.71	3.82	4.08	4.28	2.43	2.70	3.51	2.83	2.90	3.31	2.82
100	2.8	2.81	2.91	3.58	3.93	1.91	1.94	2.57	1.87	1.94	2.27	2.18
Black male¹												
0	70.0	68.08	64.47	64.10	60.00	61.48	58.91	52.26	47.55	47.14	34.05	32.54
1	70.1	68.16	64.76	64.60	61.24	63.50	61.06	55.93	51.08	51.63	42.53	42.46
5	66.2	64.31	60.98	60.86	57.60	59.98	57.69	52.95	48.69	50.18	44.25	45.06
10	61.2	59.39	56.09	56.01	52.79	55.19	52.96	48.34	44.27	45.99	40.65	41.90
15	56.3	54.48	51.22	51.14	47.96	50.39	48.23	43.74	39.83	41.75	36.77	38.26
20	51.7	49.83	46.71	46.48	43.49	45.78	43.73	39.52	35.95	38.36	33.46	35.11
25	47.2	45.41	42.40	42.09	39.45	41.38	39.49	35.72	32.67	35.54	30.44	32.21
30	42.7	40.94	38.14	37.81	35.40	37.05	35.31	32.05	29.45	32.51	27.33	29.25
35	38.2	36.47	34.02	33.60	31.42	32.81	31.21	28.48	26.39	29.54	24.42	26.16
40	33.8	32.10	30.05	29.51	27.61	28.72	27.29	25.06	23.36	26.53	21.57	23.12
45	29.5	27.92	26.18	25.61	24.03	24.89	23.59	21.88	20.59	23.55	18.85	20.09
50	25.4	24.05	22.50	22.03	20.69	21.28	20.25	19.06	17.92	20.47	16.21	17.34

See footnotes at end of table.

Table 20. Life expectancy by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table20.xls.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–1931, data are for groups of registration states as follows: 1900–1902 and 1909–1911, 10 states and the District of Columbia (D.C.); 1919–1921, 34 states and D.C. Beginning 1970 excludes deaths of nonresidents of the United States; see "Technical Notes" section]

Age, race, and sex	Average number of years of life remaining (e_x)											
	2007	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Black male¹—Con.												
55.	21.7	20.43	19.08	18.79	17.66	18.11	17.36	16.60	15.46	17.50	13.82	14.69
60.	18.3	17.14	16.01	15.89	14.93	15.29	14.91	14.37	13.15	14.74	11.67	12.62
65.	15.2	14.12	13.27	13.29	12.53	12.84	12.75	12.21	10.87	12.07	9.74	10.38
70.	12.4	11.40	10.88	10.94	10.40	10.81	10.74	10.11	8.78	9.58	8.00	8.33
75.	9.9	9.07	8.84	8.90	8.76	8.93	8.83	8.17	6.99	7.61	6.58	6.60
80.	7.7	7.12	7.01	7.03	7.35	6.87	7.07	6.58	5.42	5.83	5.53	5.12
85.	6.0	5.52	5.58	5.61	5.92	5.08	5.38	5.34	4.30	4.53	4.48	4.04
90.	4.6	4.23	4.24	4.47	4.68	3.42	3.78	4.23	3.42	3.60	4.01	3.21
95.	3.5	3.24	3.37	3.62	3.92	2.43	2.64	3.20	2.54	2.61	3.15	2.50
100.	2.6	2.48	2.63	3.24	3.61	1.91	1.93	2.29	1.68	1.64	2.14	1.89
Black female¹												
0.	76.8	75.12	73.73	72.88	68.32	66.47	62.70	55.56	49.51	46.92	37.67	35.04
1.	76.8	75.09	73.96	73.31	69.37	68.10	64.37	58.46	52.33	50.39	45.15	43.54
5.	72.9	71.22	70.16	69.54	65.70	64.54	60.93	55.40	49.81	48.70	46.42	46.04
10.	67.9	66.28	65.26	64.65	60.85	59.72	56.17	50.75	45.33	44.54	42.84	43.02
15.	63.0	61.35	60.34	59.74	55.97	54.85	51.36	46.13	40.87	40.36	39.18	39.79
20.	58.1	56.48	55.49	54.90	51.22	50.07	46.77	42.04	37.22	37.15	36.14	36.89
25.	53.3	51.67	50.72	50.13	46.57	45.40	42.35	38.20	33.93	34.35	32.97	33.90
30.	48.5	46.91	46.03	45.43	42.00	40.83	38.02	34.40	30.67	31.48	29.61	30.70
35.	43.8	42.22	41.45	40.79	37.56	36.41	33.82	30.83	27.47	28.58	26.44	27.52
40.	39.1	37.65	36.96	36.28	33.32	32.16	29.82	27.19	24.30	25.60	23.34	24.37
45.	34.6	33.26	32.58	31.94	29.31	28.14	26.07	23.89	21.39	22.61	20.43	21.36
50.	30.4	29.03	28.38	27.84	25.52	24.31	22.67	20.95	18.60	19.76	17.65	18.67
55.	26.3	24.98	24.41	24.00	21.97	20.89	19.62	18.38	16.27	17.09	14.98	15.88
60.	22.4	21.18	20.71	20.42	18.66	17.83	16.95	16.10	14.22	14.69	12.78	13.60
65.	18.7	17.65	17.37	17.13	15.67	15.12	14.54	13.95	12.24	12.41	10.82	11.38
70.	15.2	14.41	14.32	14.05	13.02	12.46	12.29	11.82	10.38	10.25	9.22	9.62
75.	12.1	11.49	11.56	11.37	10.85	10.10	10.15	9.81	8.62	8.37	7.55	7.90
80.	9.4	8.96	9.05	8.95	8.87	7.66	8.15	8.02	6.90	6.58	6.05	6.48
85.	7.1	6.86	6.99	7.09	7.00	5.44	6.15	6.41	5.48	5.22	5.09	5.10
90.	5.3	5.16	5.24	5.47	5.41	3.52	4.13	4.96	4.20	4.07	4.50	4.01
95.	3.9	3.84	3.97	4.30	4.58	2.43	2.74	3.71	3.09	3.18	3.45	3.15
100.	2.8	2.84	2.97	3.69	4.20	1.91	1.94	2.70	2.04	2.23	2.39	2.49

¹For 1939–1941 and 1949–51, data shown are for the entire nonwhite population. During these periods, life tables were not constructed for the black population. See "Technical Notes" section.

Table 21. Estimated life expectancy at birth in years, by race and sex: Death-registration states, 1900–1928, and United States, 1929–2007Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table21.xls.

[For selected years, life table values shown are estimates. Beginning 1970 excludes death of nonresidents of the United States; see "Technical Notes" section]

Area and year	All races			White			Black ¹		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
United States ²									
2007 ³	77.9	75.4	80.4	78.4	75.9	80.8	73.6	70.0	76.8
2006 ³	77.7	75.1	80.2	78.2	75.7	80.6	73.2	69.7	76.5
2005 ³	77.4	74.9	79.9	77.9	75.4	80.4	72.8	69.3	76.1
2004 ³	77.5	74.9	79.9	77.9	75.4	80.4	72.8	69.3	76.0
2003 ³	77.1	74.5	79.6	77.6	75.0	80.0	72.3	68.8	75.6
2002 ³	76.9	74.3	79.5	77.4	74.9	79.9	72.1	68.6	75.4
2001 ³	76.9	74.2	79.4	77.4	74.8	79.9	72.0	68.4	75.2
2000 ³	76.8	74.1	79.3	77.3	74.7	79.9	71.8	68.2	75.1
1999	76.7	73.9	79.4	77.3	74.6	79.9	71.4	67.8	74.7
1998	76.7	73.8	79.5	77.3	74.5	80.0	71.3	67.6	74.8
1997	76.5	73.6	79.4	77.2	74.3	79.9	71.1	67.2	74.7
1996	76.1	73.1	79.1	76.8	73.9	79.7	70.2	66.1	74.2
1995	75.8	72.5	78.9	76.5	73.4	79.6	69.6	65.2	73.9
1994	75.7	72.4	79.0	76.5	73.3	79.6	69.5	64.9	73.9
1993	75.5	72.2	78.8	76.3	73.1	79.5	69.2	64.6	73.7
1992	75.8	72.3	79.1	76.5	73.2	79.8	69.6	65.0	73.9
1991	75.5	72.0	78.9	76.3	72.9	79.6	69.3	64.6	73.8
1990	75.4	71.8	78.8	76.1	72.7	79.4	69.1	64.5	73.6
1989	75.1	71.7	78.5	75.9	72.5	79.2	68.8	64.3	73.3
1988	74.9	71.4	78.3	75.6	72.2	78.9	68.9	64.4	73.2
1987	74.9	71.4	78.3	75.6	72.1	78.9	69.1	64.7	73.4
1986	74.7	71.2	78.2	75.4	71.9	78.8	69.1	64.8	73.4
1985	74.7	71.1	78.2	75.3	71.8	78.7	69.3	65.0	73.4
1984	74.7	71.1	78.2	75.3	71.8	78.7	69.5	65.3	73.6
1983	74.6	71.0	78.1	75.2	71.6	78.7	69.4	65.2	73.5
1982	74.5	70.8	78.1	75.1	71.5	78.7	69.4	65.1	73.6
1981	74.1	70.4	77.8	74.8	71.1	78.4	68.9	64.5	73.2
1980	73.7	70.0	77.4	74.4	70.7	78.1	68.1	63.8	72.5
1979	73.9	70.0	77.8	74.6	70.8	78.4	68.5	64.0	72.9
1978	73.5	69.6	77.3	74.1	70.4	78.0	68.1	63.7	72.4
1977	73.3	69.5	77.2	74.0	70.2	77.9	67.7	63.4	72.0
1976	72.9	69.1	76.8	73.6	69.9	77.5	67.2	62.9	71.6
1975	72.6	68.8	76.6	73.4	69.5	77.3	66.8	62.4	71.3
1974	72.0	68.2	75.9	72.8	69.0	76.7	66.0	61.7	70.3
1973	71.4	67.6	75.3	72.2	68.5	76.1	65.0	60.9	69.3
1972 ⁴	71.2	67.4	75.1	72.0	68.3	75.9	64.7	60.4	69.1
1971	71.1	67.4	75.0	72.0	68.3	75.8	64.6	60.5	68.9
1970	70.8	67.1	74.7	71.7	68.0	75.6	64.1	60.0	68.3
1969	70.5	66.8	74.4	71.4	67.7	75.3	64.5	60.6	68.6
1968	70.2	66.6	74.1	71.1	67.5	75.0	64.1	60.4	67.9
1967	70.5	67.0	74.3	71.4	67.8	75.2	64.9	61.4	68.5
1966	70.2	66.7	73.9	71.1	67.5	74.8	64.2	60.9	67.6
1965	70.2	66.8	73.8	71.1	67.6	74.8	64.3	61.2	67.6
1964	70.2	66.8	73.7	71.0	67.7	74.7	64.2	61.3	67.3
1963 ⁵	69.9	66.6	73.4	70.8	67.4	74.4	63.7	61.0	66.6
1962 ⁵	70.1	66.9	73.5	70.9	67.7	74.5	64.2	61.6	66.9
1961	70.2	67.1	73.6	71.0	67.8	74.6	64.5	62.0	67.1
1960	69.7	66.6	73.1	70.6	67.4	74.1	63.6	61.1	66.3
1959	69.9	66.8	73.2	70.7	67.5	74.2	63.9	61.3	66.5
1958	69.6	66.6	72.9	70.5	67.4	73.9	63.4	61.0	65.8
1957	69.5	66.4	72.7	70.3	67.2	73.7	63.0	60.7	65.5
1956	69.7	66.7	72.9	70.5	67.5	73.9	63.6	61.3	66.1
1955	69.6	66.7	72.8	70.5	67.4	73.7	63.7	61.4	66.1
1954	69.6	66.7	72.8	70.5	67.5	73.7	63.4	61.1	65.9
1953	68.8	66.0	72.0	69.7	66.8	73.0	62.0	59.7	64.5
1952	68.6	65.8	71.6	69.5	66.6	72.6	61.4	59.1	63.8
1951	68.4	65.6	71.4	69.3	66.5	72.4	61.2	59.2	63.4
1950	68.2	65.6	71.1	69.1	66.5	72.2	60.8	59.1	62.9
1949	68.0	65.2	70.7	68.8	66.2	71.9	60.6	58.9	62.7
1948	67.2	64.6	69.9	68.0	65.5	71.0	60.0	58.1	62.5
1947	66.8	64.4	69.7	67.6	65.2	70.5	59.7	57.9	61.9

See footnotes at end of table.

Table 21. Estimated life expectancy at birth in years, by race and sex: Death-registration states, 1900–1928, and United States, 1929–2007—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/59_09/Table21.xls.

[For selected years, life table values shown are estimates. Beginning 1970 excludes death of nonresidents of the United States; see "Technical Notes" section]

Area and year	All races			White			Black ¹		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
United States ² —Con.									
1946	66.7	64.4	69.4	67.5	65.1	70.3	59.1	57.5	61.0
1945	65.9	63.6	67.9	66.8	64.4	69.5	57.7	56.1	59.6
1944	65.2	63.6	66.8	66.2	64.5	68.4	56.6	55.8	57.7
1943	63.3	62.4	64.4	64.2	63.2	65.7	55.6	55.4	56.1
1942	66.2	64.7	67.9	67.3	65.9	69.4	56.6	55.4	58.2
1941	64.8	63.1	66.8	66.2	64.4	68.5	53.8	52.5	55.3
1940	62.9	60.8	65.2	64.2	62.1	66.6	53.1	51.5	54.9
1939	63.7	62.1	65.4	64.9	63.3	66.6	54.5	53.2	56.0
1938	63.5	61.9	65.3	65.0	63.2	66.8	52.9	51.7	54.3
1937	60.0	58.0	62.4	61.4	59.3	63.8	50.3	48.3	52.5
1936	58.5	56.6	60.6	59.8	58.0	61.9	49.0	47.0	51.4
1935	61.7	59.9	63.9	62.9	61.0	65.0	53.1	51.3	55.2
1934	61.1	59.3	63.3	62.4	60.5	64.6	51.8	50.2	53.7
1933	63.3	61.7	65.1	64.3	62.7	66.3	54.7	53.5	56.0
1932	62.1	61.0	63.5	63.2	62.0	64.5	53.7	52.8	54.6
1931	61.1	59.4	63.1	62.6	60.8	64.7	50.4	49.5	51.5
1930	59.7	58.1	61.6	61.4	59.7	63.5	48.1	47.3	49.2
1929	57.1	55.8	58.7	58.6	57.2	60.3	46.7	45.7	47.8
Death-registration states									
1928	56.8	55.6	58.3	58.4	57.0	60.0	46.3	45.6	47.0
1927	60.4	59.0	62.1	62.0	60.5	63.9	48.2	47.6	48.9
1926	56.7	55.5	58.0	58.2	57.0	59.6	44.6	43.7	45.6
1925	59.0	57.6	60.6	60.7	59.3	62.4	45.7	44.9	46.7
1924	59.7	58.1	61.5	61.4	59.8	63.4	46.6	45.5	47.8
1923	57.2	56.1	58.5	58.3	57.1	59.6	48.3	47.7	48.9
1922	59.6	58.4	61.0	60.4	59.1	61.9	52.4	51.8	53.0
1921	60.8	60.0	61.8	61.8	60.8	62.9	51.5	51.6	51.3
1920	54.1	53.6	54.6	54.9	54.4	55.6	45.3	45.5	45.2
1919	54.7	53.5	56.0	55.8	54.5	57.4	44.5	44.5	44.4
1918	39.1	36.6	42.2	39.8	37.1	43.2	31.1	29.9	32.5
1917	50.9	48.4	54.0	52.0	49.3	55.3	38.8	37.0	40.8
1916	51.7	49.6	54.3	52.5	50.2	55.2	41.3	39.6	43.1
1915	54.5	52.5	56.8	55.1	53.1	57.5	38.9	37.5	40.5
1914	54.2	52.0	56.8	54.9	52.7	57.5	38.9	37.1	40.8
1913	52.5	50.3	55.0	53.0	50.8	55.7	38.4	36.7	40.3
1912	53.5	51.5	55.9	53.9	51.9	56.2	37.9	35.9	40.0
1911	52.6	50.9	54.4	53.0	51.3	54.9	36.4	34.6	38.2
1910	50.0	48.4	51.8	50.3	48.6	52.0	35.6	33.8	37.5
1909	52.1	50.5	53.8	52.5	50.9	54.2	35.7	34.2	37.3
1908	51.1	49.5	52.8	51.5	49.9	53.3	34.9	33.8	36.0
1907	47.6	45.6	49.9	48.1	46.0	50.4	32.5	31.1	34.0
1906	48.7	46.9	50.8	49.3	47.3	51.4	32.9	31.8	33.9
1905	48.7	47.3	50.2	49.1	47.6	50.6	31.3	29.6	33.1
1904	47.6	46.2	49.1	48.0	46.6	49.5	30.8	29.1	32.7
1903	50.5	49.1	52.0	50.9	49.5	52.5	33.1	31.7	34.6
1902	51.5	49.8	53.4	51.9	50.2	53.8	34.6	32.9	36.4
1901	49.1	47.6	50.6	49.4	48.0	51.0	33.7	32.2	35.3
1900	47.3	46.3	48.3	47.6	46.6	48.7	33.0	32.5	33.5

¹Prior to 1970, data for the black population are not available. Data shown for 1900–1969 are for the nonwhite population. See "Technical Notes" section.²Alaska included in 1959 and Hawaii in 1960.³Life expectancies for 2000–2007 were calculated using a revised methodology; see U.S. Life Table Report, 2005.⁴Deaths based on a 50-percent sample.⁵Figures by race exclude data for residents of New Jersey; see "Technical Notes."

Technical Notes

Life table program—Three series of complete life tables are prepared by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) for the U.S. population: decennial, annual preliminary, and annual final. The U.S. decennial life tables are based on decennial census data and deaths for a 3-year period around the census year. Preliminary life tables are based on a substantial sample (approximately 90 percent) of death records. Estimates of life expectancy from the preliminary series are published annually. The annual final life tables (referred to in this section as annual life tables) are based on a complete count of all reported deaths.

Available since 1945, the annual life tables are based on deaths occurring during the calendar year and on midyear postcensal population estimates provided by the U.S. Census Bureau. From 1945 through 1996, the annual life tables were abridged life tables and were constructed by reference to a standard table (8). Beginning with 1997 mortality data, a new methodology was employed to estimate complete life tables to age 100, with combined life table values presented for ages 100 and over (12). Prior to 1997, the annual life tables were closed at age 85, with ages 85 and over combined. Extension of the oldest age interval was implemented by NCHS for several reasons: Survival in the United States is such that over one-third of the population survives beyond age 85, improvements have occurred in age reporting at older ages, and high-quality old-age mortality data are available from the Medicare program.

The annual life tables for the total population and the populations racially classified as white and black presented in this report are based on a revised methodology that was used to estimate the 2005 U.S. annual life tables and to revise previously published U.S. annual life tables for years 2000–2004. The revised versions of the annual life tables for years 2000–2004 appear in an appendix of the 2005 U.S. life table report (13). The revised methodology improves upon the methodology developed in 1997 through the use of more precise techniques for the estimation of old age mortality, discussed in greater detail below.

Beginning with 2006 mortality data, life tables by Hispanic origin were added to the annual life table program. Prior to this time, concerns over data limitations such as racial and ethnic misclassification on U.S. death certificates and lack of Medicare data for older populations other than the white and black populations prevented the estimation of life tables for other racial and ethnic populations. Recent research has identified and quantified these data limitations and led to the development of reliable methodological strategies to address these data problems (6,7). The new methodology developed to estimate life tables for the Hispanic and non-Hispanic white and black populations is described in detail below and in “United States Life Tables by Hispanic Origin” (2).

Geographic coverage—The geographic areas covered in life tables before 1929–1931 were limited to the death-registration areas. Life tables for 1900–1902 and 1909–1911 were constructed using mortality data from the 1900 death-registration states [10 states and the District of Columbia (D.C.)] and for 1919–1921 from the 1920 death-registration states (34 states and DC). The tables for 1929–1931 through 1958 cover the coterminous United States. Decennial life table values for the 3-year period 1959–1961 were derived from data that include both Alaska and Hawaii for each year (Tables 19 and 20). Data

for each year shown in Table 21 include Alaska beginning in 1959 and Hawaii beginning in 1960. However, it is not believed that the inclusion of these two states materially affects life table values.

Revised intercensal life table values—Life table values for 1960–1969, 1970–1979, and 1980–1989 were constructed using the U.S. decennial life tables for 1959–1961, 1969–1971, and 1979–1981, respectively, as the standard tables. The life table values for years prior to 1989 appearing in this publication are based on revised intercensal estimates of the populations for those years. As a result, the life table values for these years may differ from the life table values for those years published in “Vital Statistics of the United States” for 1989 and earlier years. Life table values for 1991–1999 are based on postcensal population estimates of the population enumerated in the 1990 decennial census, while life table values for 2000–2007 are based on population estimates of the population enumerated in the 2000 decennial census. As a result, life expectancy values across the 1990s are not comparable to those estimated for 2000–2007. A comparison of life expectancy values for 2000 estimated alternately with 1990-based postcensal estimates of the 2000 population and population estimates based on the 2000 census, revealed that life expectancy values estimated using the 2000 census population estimates were slightly higher throughout the entire age range (14). Revised life table values for 1991–1999 using new intercensal population estimates based on the 2000 census will be estimated by NCHS in the near future.

New Jersey data, 1962–1964—The life tables for 1962 and 1963 for the six population groups involving race do not include data from New Jersey, which omitted the item on race from its certificates of live birth, death, and fetal death in use at the beginning of 1962. The item was restored during the latter part of 1962; however, the certificate revision without this item was used for most of 1962 as well as for 1963. For computing vital rates, populations by age, race, and sex (excluding New Jersey) were estimated to obtain comparable denominators. Approximately 7 percent of the New Jersey death records for 1964 did not contain the race designation. When the records were being electronically processed for this state, the “race not stated” deaths were proportionally allocated to white or to black.

Nonresidents—Beginning in 1970, the deaths of nonresidents of the United States were excluded from the life table statistics.

Estimation of life table functions—For some years, it was necessary to estimate life table functions for some race-sex groups. In Tables 19 and 20, figures for the black population during the periods 1939–1941 and 1949–1951 were estimated using figures for the non-white population. Life table functions were also missing in Tables 10 and 11 for race-sex groups from 1900–1902 through 1939–1941. Figures were missing for the following groups:

Years	Race and sex
1900–1902	Total white, total black
1909–1911	Total white, total black
1919–1921	Total, male, female, total white, total black
1929–1931	Total, male, female, total white, total black

These missing figures were estimated by weighted averages using population distributions as the weights. For example, life expectancy at age 20 for the total black population was estimated by a weighted average of black male and black female life expectancies at age 20, using as weights the population distribution by sex of the black population aged 20.

Annual life tables were initiated in 1945 for white males, white females, all other males, and all other females. The figures in [Table 21](#) by race and sex for the following years were estimated using a procedure other than the abridged life table methodology (15):

Years	Race and sex
1900–1945	Total
1900–1947	Male
1900–1947	Female
1900–1950	White
1900–1944	White male
1900–1944	White female

Annual life table functions were not calculated for the black population prior to 1970. In [Table 21](#), life expectancy for the black population for years prior to 1970 is estimated using figures for the total nonwhite population.

Data used for calculating life table functions

The data used to prepare the U.S. life tables include vital statistics final death counts, census population estimates, and death and population counts for Medicare beneficiaries aged 66–100 from the Centers for Medicare & Medicaid Services (CMS).

Vital statistics data—Death counts used for computing the life tables presented in this report are final numbers of deaths for 2007 collected from death certificates filed in state vital statistics offices and reported to NCHS as part of the National Vital Statistics System. Race and Hispanic origin are reported separately on the death certificate.

The U.S. Standard Certificate of Death was revised in 2003 and the race and Hispanic origin items reflect the mandate of the U.S. Office of Management and Budget (OMB) 1997 “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” (16). This revision allowed individuals to report more than one race and increased the race choices from four to five by separating the Asian and Pacific Islander groups (16). In 2007, 25 states had adopted the 1997 revised standard while 25 others continued to collect race and ethnicity data according to the 1977 standard. In order to attain uniformity and comparability during the transition period until all states implement the 1997 standard, multiple-race responses are “bridged” back to the 1977 single-race standard and Asian and Pacific Islander groups are combined according to the 1977 standard (17). The bridging procedure is the same as that used to bridge multiple-race population estimates, discussed below (18).

Population data—Populations used to estimate the life tables shown in this report were produced under a collaborative agreement with the U.S. Census Bureau and are consistent with the postcensal estimates of the 2000 census. Reflecting the guidelines on race and ethnicity reporting issued in 1997 by OMB, the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members and provided for the reporting of Asian persons separately from Native Hawaiian or other Pacific Islander persons (NHOPI) (16). Death certificate data by race for states that have not yet implemented the 1997 OMB race and ethnicity standard are thus currently incompatible with the population data collected in the 2000 census (the denominators for the rates). To produce death rates for 2007, it was necessary to “bridge” the reported population data for multiple-race persons back to single-race categories. In addition, the 2000 census counts were modified to be consistent

with the 1977 OMB race categories, that is, to report the data for Asian persons and NHOPI persons as combined category “Asian or Pacific Islander” (API) and to reflect age as of the census reference date (19). The procedures used to produce the bridged populations are described in a separate publication (18).

Medicare data—Medicare data have been traditionally employed in the estimation of U.S. decennial life tables and in the estimation of U.S. annual life tables since 1997 (20). Medicare data are considered to be more accurate than vital statistics and census data at the oldest ages because Medicare enrollees must have proof of age in order to enroll (20). However, the reliability of Medicare data beyond age 100 declines because of the small percentage of persons who enrolled at the start of the Medicare program in 1965 and for whom it was not possible to verify exact age (20). Further, the Medicare race and ethnicity classification system makes it impossible to correctly identify the Hispanic, American Indian or Alaska Native, or API populations (2,21). It is, however, possible to use Medicare data to estimate old-age mortality for both the white and black race groups, irrespective of Hispanic origin as has been done traditionally, and, to estimate old-age mortality for the non-Hispanic segments of these populations (2). As a result, data from the Medicare program are used to supplement vital statistics and census data for ages 66–100 for the total population, and for the white, black, non-Hispanic white, and non-Hispanic black populations (1,2).

To estimate the probability of death for the Medicare population for the white, black, non-Hispanic white, and non-Hispanic black populations in 2007, age-specific numbers of deaths and population counts by sex and race for the population aged 66–100 from the 2007 Medicare file were used. The data file is created by CMS for the Social Security Administration, which, under a special agreement, shares the files with NCHS.

Preliminary adjustment of the data

Adjustments for unknown age—An adjustment is made to account for the small proportion of deaths each year for which age is not reported on the death certificate. The number of deaths in each age category is adjusted proportionally to account for those with not-stated ages. The factor F is used to make the adjustment and is calculated for the total and for each sex group within a race/ethnicity for which life tables are constructed:

$$F = \frac{D}{D^a}, \quad [1]$$

where D is the total number of deaths and D^a is the total number of deaths for which age is stated. F is then applied by multiplying it times the number of deaths in each age group. [Table 1](#) shows values for F by sex used to adjust mortality data for the total, white, black, Hispanic, non-Hispanic white, and non-Hispanic black populations in 2007.

Adjustment for misclassification of race and Hispanic origin on death certificates—The latest research to evaluate race and Hispanic origin reporting on U.S. death certificates found that the misclassification of race and Hispanic origin on death certificates in the United States accounts for a net underestimate of 5 percent for total Hispanic deaths, a net underestimate of 1 percent for total non-Hispanic black deaths, and a net overestimate of less than one-half of a percent for non-Hispanic white deaths, but no underestimate for the population

Table I. Values for *F* used to adjust for not-stated age based on 2007 mortality data

Race, Hispanic origin, and sex	Total deaths	Total deaths for which age was not stated	<i>F</i>
Total	2,423,712	201	1.00008294
Male	1,203,968	156	1.00012959
Female	1,219,744	45	1.00003689
White	2,074,151	148	1.00007136
Male	1,023,951	122	1.00011916
Female	1,050,200	26	1.00002476
Black	289,585	45	1.00015542
Male	148,309	28	1.00018883
Female	141,276	17	1.00012035
Hispanic	135,519	27	1.00019927
Male	75,708	24	1.00031711
Female	59,811	3	1.00005016
Non-Hispanic white	1,939,606	81	1.00004176
Male	948,662	63	1.00006641
Female	990,944	18	1.00001816
Non-Hispanic black	268,366	31	1.00011553
Male	146,474	18	1.00012290
Female	139,892	13	1.00009294

racially classified as white or black, irrespective of Hispanic origin (6,7). These results are based on a comparison of self-reported race and Hispanic origin on Current Population Surveys (CPS) to race and Hispanic origin reported on the death certificates of a sample of decedents in the National Longitudinal Mortality Study (NLMS) who died in the period 1990–1998 (6,7).

NLMS-linked records are used to estimate sex-age-specific ratios of CPS race and Hispanic origin counts to death certificate counts (6,7). The CPS/death certificate ratio, or “classification ratio,” is specifically the ratio of the weighted count of self-reported race and ethnicity on the CPS to the weighted count of the same racial/ethnic category on the death certificates of the sample of NLMS decedents described above. It can be interpreted as the net difference in assignment of a specific race and Hispanic origin category between the two classification systems and used as a correction factor for race and Hispanic

origin misclassification (6,7). The assumption is made that the race and ethnicity reported by a CPS survey respondent is more reliable than proxy reporting of race and ethnicity by a funeral director who has little personal knowledge of the decedent. Further, public policy embodied in the 1997 OMB standard mandates that self-identification should be the method used for the collection and recording of race and ethnicity information (16).

The NLMS-based classification ratios discussed above are used to adjust age-specific number of deaths for ages 1–95 and over. Age-specific adjusted counts of death are estimated for the total Hispanic, non-Hispanic white, and non-Hispanic black populations and by sex for each group as follows:

$${}_nD_x = {}_nD_x^F * {}_nCR_x, \quad [2]$$

where ${}_nD_x^F$ is age-specific number of deaths adjusted for unknown age as described above, ${}_nCR_x$ is the age-specific classification ratios used to correct for the misclassification of race and Hispanic origin on death certificates, and ${}_nD_x$ is final age-specific counts of death adjusted for age and race and Hispanic origin misclassification. Table II shows values of the sex- and age-specific classification ratios (${}_nCR_x$) by Hispanic origin and race for the non-Hispanic population (black and white).

Correction for racial and ethnic misclassification of infant deaths is addressed by using infant death counts and live birth counts from the 2006 and 2007 linked birth/infant death data files rather than the traditional birth and death data files. In the linked file, each infant death record is linked to its corresponding birth record so that the race and ethnicity reported on the birth record can be ascribed to the infant death record. As a result, racial- and ethnic-specific infant mortality rates estimated with the linked file do not suffer from the problem of racial and ethnic discrepancies between the numerator and denominator of the rate. A ratio of infant mortality rates based on the traditional birth and death data files to infant mortality rates based on the linked birth/infant death data file shows that using the traditional files overestimates the infant mortality rate by 3.7 percent for Hispanic infants, 3.4 percent for non-Hispanic black infants, and underestimates the infant mortality rate by less than 1 percent for non-Hispanic white infants (see ratios for age 0 in Table II). Because the probability of death

Table II. Classification ratios by Hispanic origin, race for the non-Hispanic white and black populations, age, and sex

Age	Hispanic			Non-Hispanic white			Non-Hispanic black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All ages	1.0501	1.0415	1.0614	0.9960	0.9954	0.9966	1.0055	1.0066	1.0043
0–1	1.0372	1.0375	1.0392	0.9984	1.0002	0.9982	1.0337	1.0391	1.0263
1–14	0.9198*	1.0000*	0.7994*	0.9930	0.9869	1.0011	1.0200	1.0000	1.0689*
15–24	0.9650	0.9770	0.9290	1.0032	1.0040	1.0010	0.9997	0.9996	1.0000
25–34	1.0189	1.0542	0.9288	0.9975	0.9872	1.0212	1.0043	1.0034	1.0060
35–44	1.0803	1.0863	1.0657	0.9902	0.9864	0.9971	1.0066	1.0081	1.0045
45–54	1.0501	1.0152	1.1208	0.9938	0.9943	0.9930	1.0023	1.0144	0.9880
55–64	1.0260	1.0291	1.0216	0.9932	0.9915	0.9958	1.0135	1.0174	1.0087
65–74	1.0700	1.0640	1.0779	0.9950	0.9961	0.9935	1.0036	0.9979	1.0095
75–84	1.0473	1.0316	1.0651	0.9967	0.9964	0.9971	1.0040	1.0058	1.0023
85–94	1.0468	1.0261	1.0614	0.9978	0.9975	0.9979	1.0083	1.0101	1.0072
95 and over	1.1277	1.1700	1.1000	0.9981	0.9927	0.9998	0.9979	1.0300	0.9881

* Ratio is unreliable because either the unweighted number of Current Population Survey deaths or the unweighted number of death certificate deaths or both are based on fewer than 20 deaths.

† Ratios for age 0 are estimated as the ratio of infant mortality rates based on the traditional death and birth files to the infant mortality rates based on the 2007 linked birth/infant death data file and only shown for illustration purposes; see text for details.

at age 0 used to calculate the life table uses live births in the denominator (procedure described below), it is preferable to use the linked birth/infant death data file. Further, the classification ratios derived from the NLMS are unreliable for this age category as a result of extremely small sample sizes.

Interpolation of P_x and D_x —Anomalies, both random and those associated with reporting age at death, can be problematic when using vital statistics and census data by single years of age to estimate the probability of death (5,23). Graduation techniques are often used to eliminate these anomalies and to derive a smooth curve by age. Beer's ordinary minimized fifth difference formula is used to obtain smoothed values of P_x and D_x from 5-year age groupings of ${}_n P_x$ from ages 0–99 and ${}_n D_x$ from ages 5–99, and where ${}_n D_x$ has first been adjusted for not-reported age and race and Hispanic origin misclassification on the death certificate (23).

Calculation of the probability of dying, q_x

Calculation of complete period life tables starts with the estimation of age-specific probabilities of death (q_x), which are a function of age-specific death rates, D_x / P_x . Death rates are derived from the number of deaths throughout a calendar year (D_x) and the midyear population (P_x) in that calendar year.

Calculation of q_0 —Calculated using a birth cohort method that employs a separation factor (f) defined as the proportion of infant deaths in year t occurring to infants born in the previous year ($t - 1$). f is estimated by categorizing infant deaths by date of birth. The probability of death is then calculated as

$$q_0 = \frac{D_0 (1-f)}{B^t} + \frac{D_0 (f)}{B^{t-1}}, \quad [3]$$

where D_0 is the number of infant deaths in 2007, B^t is the number of live births in 2007, and B^{t-1} is the number of live births in 2006. Table III shows separation factors and numbers of births for 2006–2007.

Calculation of vital statistics (q_x) for ages 1–99—Calculated assuming that l_x (number of survivors at exact age x in the life table population) declines linearly between x and $x + 1$ (i.e., that deaths between exact age x and $x + 1$ occur on average at age $x + 1/2$). This simplification is generally considered acceptable when age intervals are 1 year in length (5). Under this assumption, $l_x = L_x + 1/2 d_x$, where L_x is the average life table population at risk of dying between ages x and $x + 1$ and d_x is the number of deaths occurring between age x and $x + 1$. q_x is then

$$q_x = \frac{d_x}{l_x} = \frac{d_x}{L_x + 1/2 d_x}.$$

One can make the same assumption for the observed population [i.e., that the observed population aged x at risk of dying at the beginning of the year (N_x) declines linearly between ages x and $x + 1$]. Under this assumption, $N_x = P_x + 1/2 D_x$, where P_x is the midyear population or average observed population at risk of dying between ages x and $x + 1$ and D_x is the observed number of deaths occurring between ages x and $x + 1$. q_x is calculated as

$$q_x = \frac{D_x}{N_x} = \frac{D_x}{P_x + 1/2 D_x}. \quad [4]$$

For $x = 1-99$, D_x is the Beer's smoothed number of deaths adjusted for not-stated age and race and Hispanic origin misclassification on the death certificate (for the Hispanic and non-Hispanic white and black populations) and P_x is the Beer's smoothed population at risk of dying between ages x and $x + 1$.

Probabilities of dying at the oldest ages for the total, white, black, non-Hispanic white, and non-Hispanic black populations

As noted above, Medicare data are used to supplement vital statistics data for the estimation of q_x at the oldest ages because it is more accurate as proof of age is required for enrollment in the Medicare program. It is used here to estimate the probability of dying for ages 66–100 for the total, white, black, non-Hispanic white, and non-Hispanic black populations. The method described in this section was first developed to estimate mortality for ages 66–100 for the 1999–2001 U.S. decennial life tables and the U.S. annual life tables beginning with year 2005 for the total population and the white and black race groups (13,22). As noted above, it is possible to use Medicare data for the non-Hispanic white and non-Hispanic black populations as well as the total black and white populations irrespective of Hispanic origin.

For ages 66–94, the probability of dying was obtained by blending vital statistics (q_x^V) with Medicare (q_x^M) through a weighting process that gives gradually declining weight to vital statistics data and gradually increasing weight to Medicare data. For ages 95–100, Medicare (q_x^M) is used exclusively. For ages 66–100, q_x is estimated as

$$q_x = \frac{1}{30} [(95 - x) q_x^V + (x - 65) q_x^M],$$

when $x = 66, \dots, 94$,

and

$$q_x = q_x^M, \text{ when } x = 95, \dots, 100, \quad [5]$$

where q_x is a combination of q_x^V and q_x^M , q_x^V is the probability of dying calculated with formula 4, and q_x^M is the probability of dying based on Medicare data.

The third component of the Heligman-Pollard (HP) model was then used to smooth the probabilities of death for ages 66–100 obtained above and also to extrapolate the probabilities of deaths for ages over 100. The HP model is a nonlinear model consisting of three components and eight parameters, where

$$\frac{q_x}{1 - q_x} = A^{(x+B)^C} + D \exp[-E(\log x - \log F)^2] + GH^x.$$

Parameter A measures mortality in the first year of life, parameter B measures the rate of change in mortality from birth to the first year of life, and parameter C measures the rate of mortality decline in childhood. Parameters D , E , and F measure the location, width, and height of the “accident hump” and parameters G and H measure mortality levels and changes for ages approximately 40 and over (23,24).

A nonlinear weighted least squares model, with weights,

$$w_x = \frac{1}{q_x^2},$$

Table III. Births in 2006 and 2007, deaths in 2007 of infants born in 2006 and 2007, and separation factors by race, Hispanic origin, and sex: United States

	Total			White			Black			Hispanic			Non-Hispanic white			Non-Hispanic black		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Births																		
2006	4,265,555	2,184,237	2,081,318	3,310,308	1,695,870	1,614,438	666,481	339,838	326,643	1,039,079	530,875	508,204	2,308,654	1,184,310	1,124,344	617,260	314,607	302,653
2007	4,317,119	2,208,327	2,108,791	3,332,651	1,706,181	1,626,469	680,450	345,657	334,793	1,062,779	542,174	520,605	2,310,333	1,184,634	1,125,699	627,191	318,692	308,499
Deaths in 2007 of infants born in																		
2006	3,556	2,004	1,552	2,306	1,300	1,006	1,055	595	460	691	381	310	1,613	925	697	1,002	563	441
2007	25,582	14,289	11,293	16,501	9,240	7,261	7,889	4,380	3,509	5,164	2,847	2,316	11,392	6,413	4,970	7,349	4,052	3,295
Separation factor (<i>f</i>)	0.122	0.123	0.121	0.123	0.123	0.122	0.118	0.120	0.116	0.118	0.118	0.118	0.124	0.126	0.123	0.120	0.122	0.118

Table IV. Estimated parameters *G* and *H* used for predicting q_x from ages 66–130: U.S. life tables, 2007

	Population								
	Total	Male	Female	White	White male	White female	Black	Black male	Black female
<i>G</i>	0.0000134	0.0000202	0.0000041	0.0000114	0.0000167	0.0000058	0.0000847	0.0001722	0.0000384
<i>H</i>	1.1105	1.1075	1.1242	1.1127	1.1101	1.1199	1.0872	1.0807	1.0957

was used to fit the third component of the HP model in the age range 65–100. The model was estimated as

$$\frac{q_x}{1 - q_x} = GH^x \tag{6}$$

Predicted \hat{q}_x was then estimated as

$$\hat{q}_x = \frac{\hat{G} \hat{H}^x}{1 + \hat{G} \hat{H}^x} \tag{7}$$

where \hat{G} and \hat{H} are the predicted parameters given by fitting model 6. Predicted parameters in 2007 are presented in Table IV. Although reliable data-based probabilities of death for older ages are only available through ages 100 or so, q_x was extrapolated to age 130 in order to estimate the life table population until no survivors remain. This information is then used to estimate L_x for ages 100–130, which is used to close the table with the age category 100 and over, combined (discussed below).

To ensure a smooth transition from vital q_x^V and predicted \hat{q}_x the two were blended from ages 66–74 with a graduating process:

$$q_x = \frac{1}{10} [(75 - x)q_x^V + (x - 65)\hat{q}_x], \tag{8}$$

when $x = 66, \dots, 74$.

Probabilities of dying at the oldest ages for the Hispanic population

As previously noted, Medicare data are unreliable for the Hispanic population because of the inconsistencies in the Medicare race and ethnicity classification system. As a result, it was necessary to use other methods to estimate mortality at the oldest ages for this population. Past age 80, mortality estimates based strictly on vital statistics for the Hispanic population are too low, despite correction for ethnic misclassification on the death certificate.

A consistent finding across diverse studies has been that Hispanic mortality in the adult and advanced ages varies between approximately 80 percent and 89 percent of that of the non-Hispanic white population (6,7,25,26). The Brass relational logit model takes advantage of the relationship between Hispanic and non-Hispanic white mortality previously identified and is one that has been widely and successfully used to predict the mortality of one population relative to another at the older ages (5,27–29). Using the age-specific mortality pattern of the non-Hispanic white population as the “standard,” Brass’s relational logit model is used to predict Hispanic mortality in the older ages. The “standard” is fit to Hispanic data in the age interval 45–80 and the predicted parameters are used to estimate the probabilities of death for ages 76–100. This method allows the relationship between the two populations in the younger ages to be carried over to the older ages (5,27–29).

The Brass relational logit model expresses the age-specific mortality pattern of a population of interest as a function of the age-specific mortality pattern of a “standard” population and is expressed as

$$\hat{Y}(x) = \alpha + \beta Y^S(x) \tag{9}$$

where $\hat{Y}(x)$ is the predicted logit of the probability of death (q_x) in the population of interest, i.e.,

$$\text{logit}[q_x] = \ln \left[\frac{q(x)}{1 - q(x)} \right]$$

$Y^S(x)$ is the logit of the probability of death (q_x^S) in the standard population, i.e.,

$$\text{logit}[q_x^S] = \ln \left[\frac{q_x^S}{1 - q_x^S} \right]$$

α is the predicted parameter that measures the level of mortality of the population of interest relative to the standard population, and β is the predicted parameter that measures the slope of the mortality function of the population of interest relative to the standard population (24–27). Table V shows values of predicted α and β and their standard errors.

Ordinary least squares (OLS) regression was used to fit equation 9 in the age range 45–80. The resulting predicted parameters α and β were then used to estimate the predicted probability of death for ages 76–130 in the Hispanic population. \hat{q}_x was predicted to age 130 in order to estimate the life table population until no survivors remain, as was done for the non-Hispanic white and non-Hispanic black populations. This information is then used to estimate L_x for ages 100–130, which is used to close the table with the age category 100 and over, combined (discussed in the following section).

Predicted \hat{q}_x is estimated by transforming its logit [$\hat{Y}(x)$] back as follows:

$$\hat{q}_x = \frac{\exp[\hat{Y}(x)]}{1 + \exp[\hat{Y}(x)]} = \frac{\exp[\alpha + \beta Y^S(x)]}{1 + \exp[\alpha + \beta Y^S(x)]} \tag{10}$$

To ensure a smooth transition from vital q_x^V and predicted \hat{q}_x , the two were blended from ages 76–80 with a graduating process:

$$q_x = \frac{1}{6} [(81 - x)q_x^V + (x - 75)\hat{q}_x], \tag{11}$$

when $x = 76, \dots, 80$.

Finally, to close the table at ages 100 and over (combined), ${}_{\infty}q_{100}$ is set equal to 1.0 because all survivors to this age will die at some point in the open-ended age interval. Once q_x is obtained for each single age year, the other life table functions are easily calculated.

Calculation of remaining life table functions for all groups

Survivor function (l_x)—The life table radix, l_0 , is set at 100,000. For ages greater than 0, the number of survivors remaining at exact age x is calculated as

$$l_x = l_{x-1}(1 - q_{x-1}) \tag{12}$$

Table V. Estimated Brass Relational Logit Model Parameters α and β , Hispanic origin population, 2007

	Total	(SE)	Male	(SE)	Female	(SE)
α	-0.3715	0.026	-0.3874	0.036	-0.2985	0.030
β	0.9687	0.006	0.9587	0.008	0.9920	0.006

NOTE: SE is standard error.

Decrement function (d_x)—The number of deaths occurring between age x and $x + 1$ is calculated from the survivor function:

$$d_x = l_x - l_{x+1} = l_x q_x. \quad [13]$$

Note that ${}_{\infty}d_{100} = {}_{\infty}l_{100}$ since ${}_{\infty}q_{100} = 1.0$.

Person-years lived (L_x)—Calculated for ages 1–99 assuming that the survivor function declines linearly between age x and $x + 1$. This gives the formula

$$L_x = \frac{1}{2}(l_x + l_{x+1}) = l_x - \frac{1}{2}d_x. \quad [14]$$

For $x=0$, the separation factor f is used to calculate L_0 :

$$L_0 = f l_0 + (1 - f) l_1. \quad [15]$$

Finally, ${}_{\infty}L_{100}$ is estimated as the sum of the extrapolated L_x values for ages 100–130.

Person-years lived at and above age x (T_x)—Calculated by summing L_x values at and above age x :

$$T_x = \sum_{x=0}^{\infty} L_x. \quad [16]$$

Life expectancy at age x (e_x)—Calculated as

$$e_x = \frac{T_x}{l_x}. \quad [13]$$

Abridging the complete life table

An abridged or collapsed version of the complete life table can be easily calculated in which life table functions are shown for 5-year rather than single-year age intervals. It is often desirable to

summarize the life table and save space when publishing life table data by single age years. The abridgement of the complete life table is simplified by an important property of three of the six life table functions. The l_x , T_x , and e_x functions describe exact age x , that is, the beginning of the age interval x to $x + n$ (n denotes the length of the age interval for 5-year age intervals $n = 5$). Life expectancy at age 20 (e_{20}), for example, has the same value regardless whether the age interval is 20–21 or 20–25. Thus, the values l_x , T_x , and e_x can be extracted at 5-year intervals from the complete life table and placed into the abridged life table (compare l_x , T_x , and e_x in Table VI with the same functions in Table 1). It is also illustrative to compare values for e_x and l_x in Tables A–D with their corresponding values presented in Tables 1–18. The q_x , d_x , and L_x functions, in contrast, describe the age interval x to $x + n$. In fact, for abridged life tables, the notation for these functions is different (${}_nq_x$, ${}_nd_x$, ${}_nL_x$). Thus, ${}_5q_{20}$ is the probability of dying between ages 20 and 25 and will obviously be somewhat larger than q_{20} , the probability of dying between ages 20 and 21. Taking this into account, ${}_nq_x$, ${}_nd_x$, and ${}_nL_x$ must be recalculated in the abridged life table. It is simplest to begin with ${}_nd_x$. The calculations are made for all but the final age interval as

$${}_nd_x = l_x - l_{x+n}$$

$${}_nq_x = \frac{{}_nd_x}{{}_nl_x}$$

$${}_nL_x = T_x - T_{x+n}.$$

Note that for the open-ended interval, ages 100 and over, ${}_{\infty}d_{100} = l_{100}$, ${}_{\infty}q_{100} = 1.0$, and ${}_{\infty}L_{100} = T_{100}$. Table IV shows each of the life table functions for the 2007 U.S. total population abridged from Table 1.

Table VI. Life table for the total population: United States, 2007

Age	Probability of dying between ages x to $x+1$ q_x	Number surviving to age x l_x	Number dying between ages x to $x+1$ d_x	Person-years lived between ages x to $x+1$ L_x	Total number of person-years lived above age x T_x	Expectation of life at age x e_x
0–1	0.006761	100,000	676	99,406	7,793,398	77.9
1–4	0.001140	99,324	113	397,023	7,693,992	77.5
5–9	0.000683	99,211	68	495,870	7,296,969	73.6
10–14	0.000839	99,143	83	495,562	6,801,099	68.6
15–19	0.003089	99,060	306	494,626	6,305,537	63.7
20–24	0.004906	98,754	485	492,591	5,810,911	58.8
25–29	0.004959	98,269	487	490,128	5,318,320	54.1
30–34	0.005524	97,782	540	487,600	4,828,192	49.4
35–39	0.007251	97,242	705	484,547	4,340,592	44.6
40–44	0.011003	96,537	1,062	480,214	3,856,045	39.9
45–49	0.016870	95,475	1,611	473,601	3,375,831	35.4
50–54	0.025217	93,864	2,367	463,734	2,902,230	30.9
55–59	0.035858	91,497	3,281	449,712	2,438,496	26.7
60–64	0.052469	88,216	4,629	430,149	1,988,784	22.5
65–69	0.077792	83,587	6,502	402,523	1,558,635	18.6
70–74	0.119029	77,085	9,175	363,858	1,156,112	15.0
75–79	0.191303	67,910	12,991	308,631	792,254	11.7
80–84	0.297772	54,918	16,353	234,712	483,622	8.8
85–89	0.441837	38,565	17,040	149,648	248,911	6.5
90–94	0.612543	21,526	13,185	72,247	99,263	4.6
95–99	0.778938	8,340	6,497	22,835	27,016	3.2
100 and over	1.000000	1,844	1,844	4,181	4,181	2.3

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