

United States Life Tables, 2015

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Abstract

Objectives—This report presents complete period life tables for the United States by race, Hispanic origin, and sex, based on age-specific death rates in 2015.

Methods—Data used to prepare the 2015 life tables are 2015 final mortality statistics; July 1, 2015, population estimates based on the 2010 decennial census; and 2015 Medicare data for persons aged 66–99. The methodology used to estimate the life tables for the Hispanic population remains unchanged from that developed for the publication of life tables by Hispanic origin for data year 2006. The methodology used to estimate the 2015 life tables for all other groups was first implemented with data year 2008.

Results—In 2015, the overall expectation of life at birth was 78.7 years, decreasing by 0.2 year from 2014. From 2014 to 2015, life expectancy at birth decreased by 0.2 year for both males (76.5 to 76.3) and females (81.3 to 81.1). Life expectancy at birth decreased by 0.2 year for the white population (79.1 to 78.9) and by 0.1 year for the black population (75.6 to 75.5). Life expectancy at birth decreased by 0.2 year for the Hispanic population (82.1 to 81.9) and for the non-Hispanic black population (75.3 to 75.1). Life expectancy at birth decreased by 0.1 year for the non-Hispanic white population (78.8 to 78.7).

Keywords: life expectancy • survival • death rates • race • Hispanic origin

Introduction

There are two types of life tables: the cohort (or generation) life table and the period (or current) life table. 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 just 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

incompleteness (1). 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 (2,3).

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 period in time. For example, a period life table for 2015 assumes a hypothetical cohort that is subject throughout its lifetime to the age-specific death rates prevailing for the actual population in 2015. 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.

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 single year of age. An abridged life table typically contains data by 5- or 10-year age intervals. A complete life table can easily be aggregated into 5- or 10-year age groups (see [Technical Notes](#) for instructions). 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 (4). This report presents complete period life tables by race, Hispanic origin, and sex.

Data and Methods

The data used to prepare the U.S. life tables for 2015 are final numbers of deaths for the year 2015; July 1, 2015 population estimates based on the 2010 decennial census; and age-specific death and population counts for Medicare beneficiaries aged 66–99 for the year 2015 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. The U.S. life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates using classification ratios (or correction factors) generated from an updated evaluation of race and Hispanic origin misclassification on

death certificates in the United States (5). (See [Technical Notes](#) for a detailed description of the data sets and methodology used to estimate Hispanic-origin life tables.)

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 2015 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 [Table A](#).

Life expectancy at birth (e_0) for 2015 for the total population was 78.7 years. This represents the average number of years that the members of the hypothetical life table cohort can 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 that survives to specified ages. The l_x column of the life table provides the data for computing this proportion. [Table B](#) summarizes the number of survivors by age, race, Hispanic origin, and sex. To illustrate, 57,811 persons out of the original 2015 hypothetical life table cohort of 100,000 (or 57.8%) were alive at exact age 80. In other words, the probability that a person will survive from birth to age 80, given 2015 age-specific mortality, is 57.8%. 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, divide the number of survivors at age 85 (42,192) by the number of survivors at age 20 (98,943), which results in a 42.6% probability of survival.

Explanation of life table columns

Column 1. Age (between x and $x + 1$)—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 and $x + 1$. For example, for males in the age interval 20–21 years, the probability of dying is 0.001095 ([Table 2](#)). This 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, 99,462 will complete the first year of life and enter the second; 99,326 will reach age 10; 99,121 will reach age 20; and 48,948 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, 639 will die in the first year of life; 108 between ages 20 and 21; and 999 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 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 98,720 for males in the age interval 20–21 is the total number of years lived between the 20th and 21st birthdays by the 98,774 males (column 3) 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 hypothetical life table cohort. For example, the figure 5,646,558 is the total number of years lived after attaining age 20 by the 98,774 males reaching that age ([Table 2](#)).

Column 7. Expectation of life (e_x)—The expectation of life at any given age is the average number of years remaining to be lived by those surviving to that age, based on a given set of age-specific rates of dying. It is derived by dividing the total person-years that would be lived beyond 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 57.2 years (5,646,558 divided by 98,774) ([Table 2](#)).

Results

Life expectancy in the United States

[Tables 1–18](#) show complete life tables for 2015 by race (white and black), Hispanic origin, and sex. [Table A](#) summarizes life expectancy by age, race, Hispanic origin, and sex. Life expectancy at birth for 2015 represents the average number of years that a group of infants would live if they were to experience throughout life the age-specific death rates prevailing in 2015. In 2015, life expectancy at birth was 78.7 years, decreasing by 0.2 year from 2014.

Changes in mortality by age and cause of death can have a major effect on life expectancy. Life expectancy at birth decreased by 0.2 year in 2015 from 2014 primarily because of increases in mortality from unintentional injuries, Alzheimer’s disease, homicide, Chronic lower respiratory diseases (CLRD), and suicide. The decrease in life expectancy was slightly offset by decreases in mortality from cancer and Influenza and pneumonia. Life expectancy at birth for both males and females decreased by 0.2 year from 2014 to 2015. For males, the decrease was due to increases in mortality from unintentional injuries, homicide, Alzheimer’s disease, and suicide. These increases were offset somewhat by decreases in mortality from cancer and Influenza and pneumonia. For females, the decrease was due to increases in mortality from Alzheimer’s disease, unintentional injuries, CLRD, heart disease, and stroke, which were offset by decreases in mortality from cancer and Influenza and pneumonia (6).

The difference in life expectancy between the sexes was 4.8 years in 2015, unchanged from the difference in 2014. From 1900 to 1975, the difference in life expectancy between the sexes increased from 2.0 years to 7.8 years ([Table 19](#)). 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

Table A. Expectation of life, by age, race, Hispanic origin, race for the non-Hispanic population, and sex: United States, 2015

Age (years)	All races and origins			White			Black			Hispanic ¹			Non-Hispanic white ¹			Non-Hispanic black ¹		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0.....	78.7	76.3	81.1	78.9	76.6	81.3	75.5	72.2	78.5	81.9	79.3	84.3	78.7	76.3	81.0	75.1	71.9	78.1
1.....	78.2	75.8	80.5	78.3	76.0	80.6	75.3	72.1	78.3	81.3	78.7	83.7	78.1	75.7	80.4	75.0	71.8	77.9
5.....	74.3	71.9	76.6	74.4	72.1	76.7	71.5	68.3	74.4	77.4	74.8	79.7	74.1	71.8	76.4	71.1	67.9	74.0
10.....	69.3	66.9	71.7	69.4	67.1	71.7	66.5	63.3	69.4	72.4	69.8	74.8	69.2	66.9	71.5	66.1	62.9	69.1
15.....	64.4	62.0	66.7	64.5	62.2	66.8	61.6	58.4	64.5	67.5	64.9	69.8	64.2	61.9	66.5	61.2	58.0	64.1
20.....	59.5	57.2	61.8	59.6	57.3	61.9	56.8	53.7	59.6	62.6	60.0	64.9	59.4	57.1	61.6	56.4	53.3	59.3
25.....	54.8	52.5	56.9	54.8	52.7	57.0	52.1	49.2	54.7	57.8	55.3	60.0	54.6	52.4	56.7	51.8	48.9	54.4
30.....	50.0	47.9	52.1	50.1	48.0	52.2	47.5	44.7	49.9	53.0	50.6	55.1	49.9	47.8	51.9	47.2	44.4	49.6
35.....	45.3	43.3	47.3	45.4	43.4	47.4	42.9	40.2	45.2	48.2	45.9	50.3	45.2	43.2	47.2	42.6	39.9	44.9
40.....	40.7	38.7	42.5	40.7	38.8	42.6	38.3	35.8	40.5	43.5	41.2	45.4	40.6	38.7	42.4	38.1	35.5	40.3
45.....	36.1	34.2	37.9	36.1	34.3	37.9	33.8	31.4	36.0	38.8	36.6	40.6	36.0	34.1	37.8	33.6	31.1	35.7
50.....	31.6	29.8	33.3	31.6	29.9	33.3	29.5	27.1	31.6	34.2	32.0	35.9	31.5	29.8	33.2	29.3	26.9	31.3
55.....	27.3	25.6	28.9	27.3	25.7	28.9	25.4	23.2	27.3	29.7	27.7	31.3	27.3	25.6	28.8	25.3	23.0	27.2
60.....	23.2	21.7	24.6	23.2	21.7	24.6	21.7	19.6	23.4	25.5	23.6	26.9	23.2	21.7	24.5	21.5	19.4	23.2
65.....	19.3	18.0	20.5	19.3	18.0	20.5	18.2	16.4	19.6	21.4	19.7	22.6	19.3	18.0	20.4	18.1	16.2	19.5
70.....	15.6	14.4	16.6	15.6	14.4	16.5	14.9	13.3	16.0	17.5	16.0	18.5	15.5	14.4	16.5	14.8	13.2	15.9
75.....	12.2	11.2	13.0	12.1	11.2	12.9	11.9	10.6	12.7	13.9	12.6	14.6	12.1	11.1	12.9	11.8	10.5	12.7
80.....	9.1	8.3	9.7	9.1	8.3	9.6	9.2	8.2	9.7	10.5	9.5	11.1	9.1	8.3	9.6	9.1	8.1	9.7
85.....	6.6	5.9	7.0	6.5	5.9	6.9	6.9	6.1	7.2	7.7	6.8	8.0	6.5	5.9	6.9	6.8	6.1	7.2
90.....	4.6	4.1	4.8	4.5	4.0	4.7	5.0	4.5	5.2	5.4	4.7	5.5	4.5	4.0	4.7	5.0	4.5	5.2
95.....	3.2	2.8	3.3	3.1	2.7	3.2	3.7	3.3	3.8	3.7	3.3	3.8	3.1	2.7	3.2	3.7	3.3	3.8
100.....	2.2	2.0	2.3	2.2	2.0	2.2	2.7	2.4	2.7	2.7	2.3	2.6	2.2	2.0	2.2	2.7	2.5	2.7

¹Life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

cigarette smoking (7,8). Between 1979 and 2010, the difference in life expectancy between the sexes narrowed from 7.8 years to 4.8 years (Table 19). The general decline in the sex difference 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 (7,8).

The 2015 life table may be used to compare life expectancy at any age from birth onward. On the basis of mortality experienced in 2015, a person aged 65 could expect to live an average of 19.3 more years for a total of 84.3 years; a person aged 85 could expect to live an additional 6.6 years for a total of 91.6 years; and a person aged 100 could expect to live an additional 2.2 years, on average (Table A).

Life expectancy by race

From 2014 to 2015, life expectancy decreased by 0.1 year for the black (75.6 to 75.5) and 0.2 year for the white (79.1 to 78.9) populations (Table 19). The difference in life expectancy between the white and black populations was 3.4 years in 2015, 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 (Table 19). 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 (8).

Among the four race-sex groups, white females continued to have the highest life expectancy at birth (81.3 years), followed by

black females (78.5), white males (76.6), and black males (72.2) (Figure 1). Between 2014 and 2015, life expectancy decreased by 0.3 years for black males (72.5 to 72.2). It remained unchanged for black females (78.5). Black males experienced a decline in life expectancy every year for 1984–1989 (8), followed by annual increases in 1990–1992 and 1994–2012. Between 2014 and 2015, life expectancy declined by 0.1 year for white males (76.7 to 76.6) and for white females (81.4 to 81.3). Overall, gains in life expectancy from 1980 through 2015 were 8.4 years for black males, 6.0 years for black females, 5.9 years for white males, and 3.2 years for white females (Table 19).

Life expectancy by Hispanic origin

From 2014 to 2015, life expectancy decreased by 0.2 year for the Hispanic population (82.1 to 81.9) and the non-Hispanic black population (75.3 to 75.1). It decreased by 0.1 year for the non-Hispanic white population (78.8 to 78.7) (Table 19). In 2015, the Hispanic population had a life expectancy advantage at birth of 3.2 years over the non-Hispanic white population and 6.8 years over the non-Hispanic black population. The U.S. life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates (see Technical Notes for a detailed description of the methodology).

Among the six Hispanic-origin race-sex groups, Hispanic females continued to have the highest life expectancy at birth (84.3

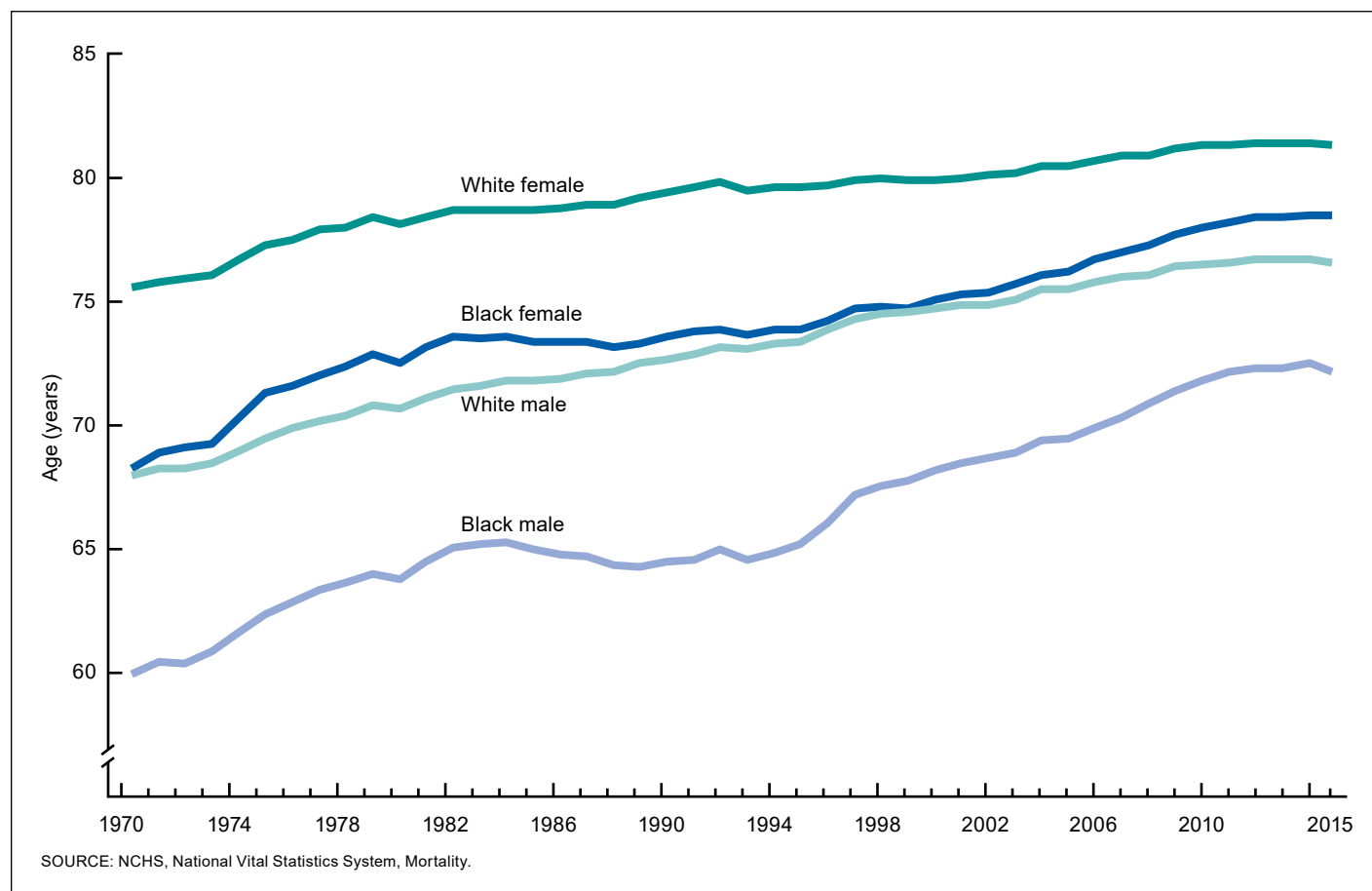


Figure 1. Life expectancy at birth, by race and sex: United States, 1970–2015

years), followed by non-Hispanic white females (81.0), Hispanic males (79.3), non-Hispanic black females (78.1), non-Hispanic white males (76.3), and non-Hispanic black males (71.9) (Figure 2). The smallest difference is between Hispanic males and non-Hispanic black females, with Hispanic males having an advantage of 1.2 years. The largest difference is between Hispanic females and non-Hispanic black males, with Hispanic females having a life expectancy at birth 12.4 years greater.

The Hispanic mortality advantage is also evident in the effect produced on life expectancy at birth when race and Hispanic origin are considered separately. Until 2006, U.S. life tables were produced only by race (white and black), regardless 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, regardless of Hispanic origin, life expectancy at birth was 75.5 years in 2015 but was 75.1 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 78.9 years in 2015, but was 78.7 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 was also observed for each race-sex group. (See [Technical Notes](#) for a detailed description of the methodology used to estimate the Hispanic-origin life tables.)

Survivorship in the United States

Table B summarizes the number of survivors out of 100,000 persons born alive (l_x) by age, race, Hispanic origin, and sex for 2015. Table 20 shows trends in survivorship from 1900 to 2015. In 2015, 99.4% of all infants born in the United States survived the first year of life. In contrast, 87.6% of infants born in 1900 survived the first year. Of the 2015 period life table cohort, 57.8% survived to age 80 and 1.9% survived to age 100. In 1900, 13.5% of the life table cohort survived to age 80 and 0.03% survived to age 100 (Table 20).

Survivorship by race

Among the four race-sex groups, white females have the highest median age at death, with about 52.6% surviving to age 84 (Tables 4–9). Of the original hypothetical cohort of 100,000 infant white females, 99.2% survive to age 20, 88.2% survive to age 65, and 49.1% survive to age 85 (Table 6). White males have slightly higher survival rates than black females at the younger ages, with 98.9% surviving to age 20 compared with 98.5% of black females (Tables 5 and 9). At the older ages, however, black female survival surpasses white male survival. By age 85, white male survival is 35.6% compared with 42.0% for black females. The median age at death for black males is close to 76 years, about 8 years less than that for white females (Table 8). Among black males, 97.9% survive to age 20, 72.5% to age 65, and 26.2% to age 85. By age 100, there is very little difference between the white and black populations in

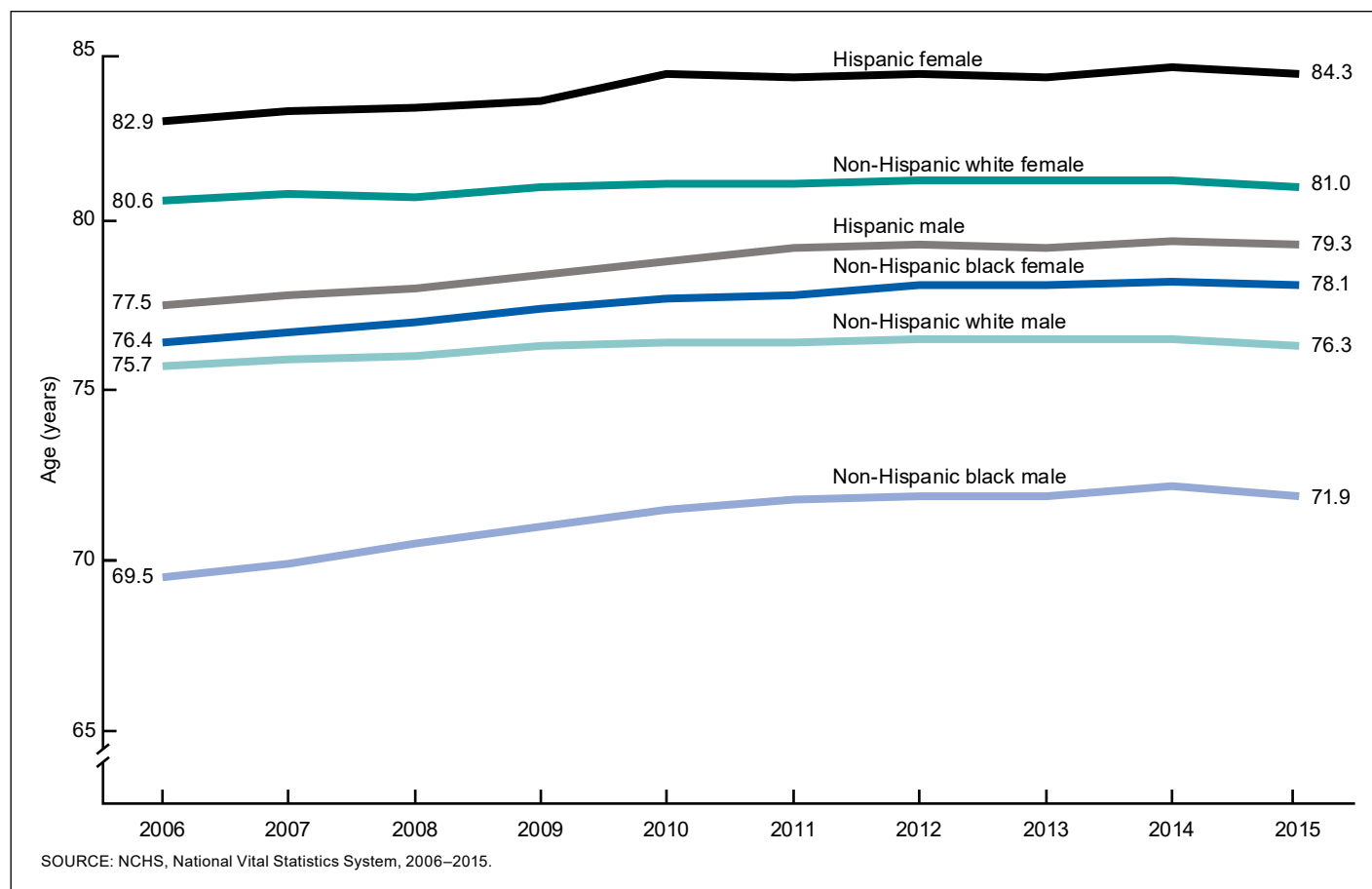


Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006–2015

Table B. Number of survivors out of 100,000 born alive, by age, race, Hispanic origin, race for non-Hispanic population, and sex: United States, 2015

Age (years)	All races and origins			White			Black			Hispanic ¹			Non-Hispanic white ¹			Non-Hispanic black ¹		
	Total	Male	Female	Total	Male	Female	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	100,000	100,000	100,000	100,000	100,000	100,000
1.....	99,411	99,361	99,462	99,508	99,467	99,551	98,861	98,760	98,966	99,503	99,465	99,543	99,510	99,467	99,556	98,875	98,783	98,971
5.....	99,312	99,250	99,376	99,419	99,368	99,473	98,708	98,580	98,840	99,426	99,381	99,474	99,420	99,358	99,486	98,707	98,602	98,837
10.....	99,254	99,185	99,326	99,365	99,307	99,426	98,626	98,488	98,767	99,379	99,327	99,436	99,366	99,293	99,443	98,617	98,510	98,761
15.....	99,181	99,101	99,265	99,296	99,228	99,367	98,529	98,373	98,691	99,322	99,263	99,387	99,294	99,204	99,389	98,513	98,395	98,680
20.....	98,943	98,774	99,121	99,072	98,928	99,222	98,194	97,868	98,532	99,132	99,006	99,267	99,066	98,903	99,239	98,149	97,848	98,506
25.....	98,503	98,135	98,891	98,652	98,328	98,995	97,574	96,926	98,247	98,785	98,509	99,088	98,637	98,293	99,001	97,482	96,838	98,198
30.....	97,980	97,399	98,591	98,137	97,612	98,693	96,863	95,878	97,871	98,403	97,954	98,898	98,087	97,533	98,669	96,742	95,754	97,800
35.....	97,357	96,569	98,179	97,518	96,794	98,284	96,021	94,720	97,329	97,970	97,369	98,634	97,417	96,647	98,222	95,860	94,552	97,221
40.....	96,609	95,615	97,640	96,782	95,862	97,754	94,972	93,348	96,579	97,465	96,686	98,318	96,618	95,640	97,638	94,739	93,086	96,419
45.....	95,619	94,409	96,867	95,808	94,674	96,999	93,595	91,674	95,473	96,782	95,785	97,860	95,571	94,377	96,813	93,285	91,318	95,251
50.....	94,158	92,657	95,700	94,374	92,952	95,864	91,622	89,341	93,833	95,733	94,481	97,083	94,065	92,586	95,601	91,228	88,889	93,537
55.....	91,867	89,881	93,895	92,125	90,218	94,109	88,560	85,685	91,320	94,069	92,382	95,871	91,737	89,781	93,758	88,076	85,133	90,943
60.....	88,559	85,842	91,312	88,900	86,274	91,612	84,017	80,218	87,630	91,620	89,243	94,114	88,434	85,769	91,173	83,429	79,574	87,139
65.....	84,055	80,330	87,800	84,518	80,922	88,204	77,782	72,521	82,709	88,009	84,731	91,362	84,004	80,383	87,711	77,083	71,779	82,097
70.....	78,066	73,317	82,827	78,581	73,995	83,268	70,220	63,506	76,456	83,120	78,665	87,539	78,048	73,467	82,734	69,394	62,643	75,710
75.....	69,559	63,777	75,340	70,065	64,463	75,765	60,498	52,519	67,857	76,144	70,358	81,715	69,515	63,951	75,193	59,590	51,598	67,008
80.....	57,811	51,163	64,422	58,217	51,743	64,752	48,499	39,756	56,513	66,261	59,315	72,769	57,655	51,245	64,150	47,595	38,879	55,629
85.....	42,192	35,290	48,948	42,381	35,608	49,097	34,490	26,155	42,015	52,073	44,186	59,091	41,886	35,194	48,548	33,715	25,459	41,212
90.....	24,285	18,475	29,772	24,255	18,550	29,718	20,023	13,658	25,628	34,005	26,372	40,204	23,921	18,295	29,334	19,498	13,224	25,057
95.....	9,292	6,037	12,204	9,091	5,895	11,966	8,516	4,982	11,474	15,951	10,553	19,669	8,951	5,797	11,794	8,274	4,808	11,196
100.....	1,935	999	2,724	1,809	914	2,566	2,334	1,110	3,273	4,511	2,335	5,681	1,781	896	2,529	2,270	1,074	3,197

¹Life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

terms of survival. For example, 0.9% of white males, 1.1% of black males, 2.6% of white females, and 3.3% of black females survive to age 100.

Survivorship by Hispanic origin

In 2015, 99.5% of Hispanic and non-Hispanic white infants survived the first year of life, compared with 98.9% of non-Hispanic black infants (Tables 10–19). For both the Hispanic and non-Hispanic white populations, 99.1% survived to age 20, while 98.1% of the non-Hispanic black population survived to age 20. By age 65, the Hispanic population has a clear survival advantage compared with the other two populations. Overall, 88.0% of the Hispanic population survived to age 65, compared with 84.0% of the non-Hispanic white and 77.1% of the non-Hispanic black populations. The Hispanic survival advantage increases with age so that by age 85, 52.1% of the Hispanic population has survived, compared with 41.9% of the non-Hispanic white and 33.7% of the non-Hispanic black populations.

Among the six Hispanic-origin race-sex groups, Hispanic females have the highest median age at death, with 48.3% surviving to age 88 (Figure 3). The group with the next highest median age at death is non-Hispanic white females, with 48.5% surviving to age 85. Hispanic males had 50.7% surviving to age 83, followed by non-Hispanic black females with 50.2% surviving to age 82, non-Hispanic white males with 48.3% surviving to age 81, and finally non-Hispanic black males with 49.2% surviving to age 76 (see Technical Notes).

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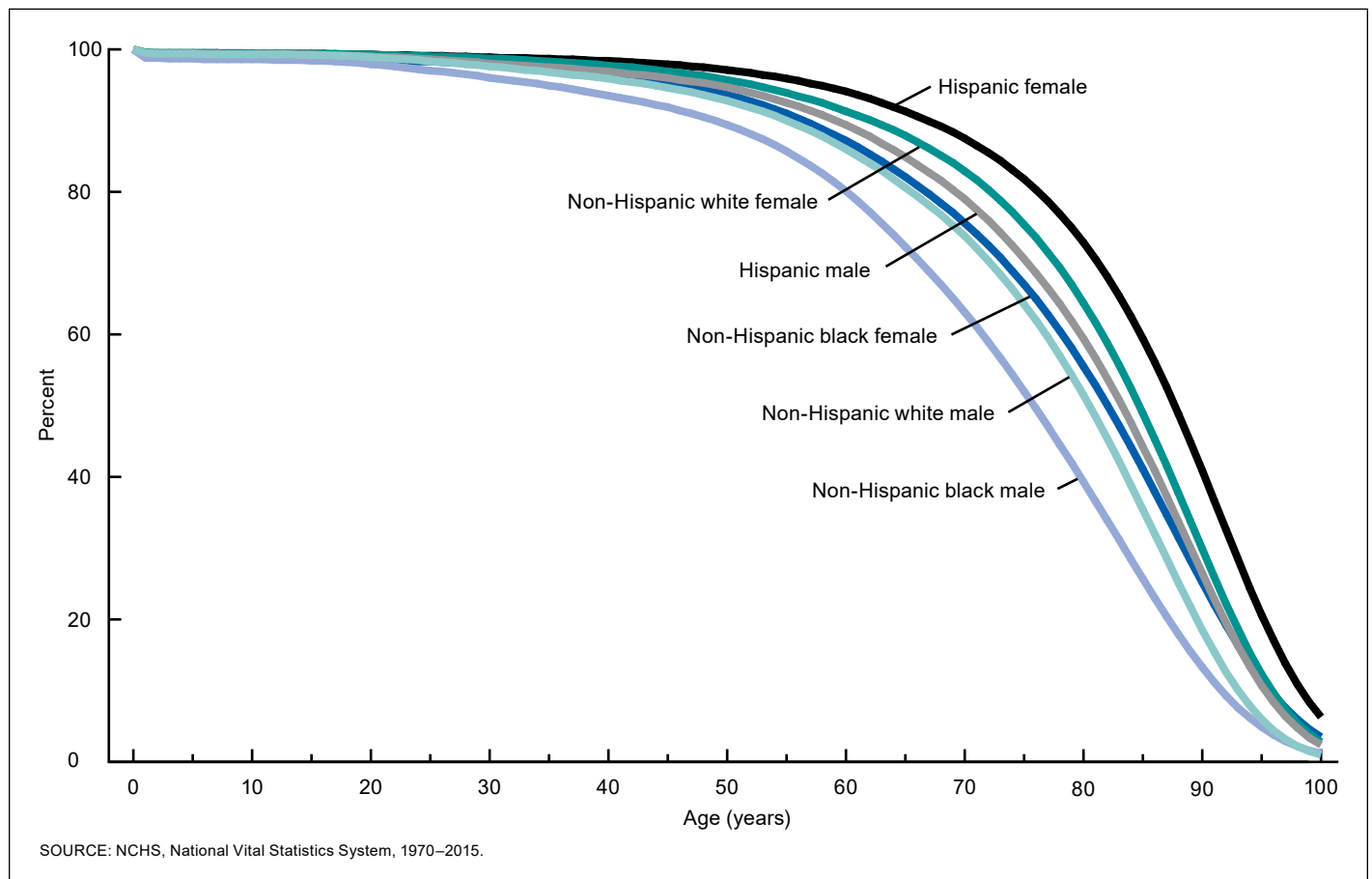


Figure 3. Percentage surviving, by Hispanic origin, race, age, and sex: United States, 2015

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Table 1. Life table for total population: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table01.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.005894	100,000	589	99,483	7,872,239	78.7
1-2	0.000403	99,411	40	99,391	7,772,756	78.2
2-3	0.000252	99,371	25	99,358	7,673,366	77.2
3-4	0.000193	99,345	19	99,336	7,574,008	76.2
4-5	0.000145	99,326	14	99,319	7,474,672	75.3
5-6	0.000143	99,312	14	99,305	7,375,353	74.3
6-7	0.000128	99,298	13	99,291	7,276,048	73.3
7-8	0.000116	99,285	11	99,279	7,176,757	72.3
8-9	0.000104	99,273	10	99,268	7,077,478	71.3
9-10	0.000095	99,263	9	99,258	6,978,210	70.3
10-11	0.000091	99,254	9	99,249	6,878,951	69.3
11-12	0.000098	99,245	10	99,240	6,779,702	68.3
12-13	0.000125	99,235	12	99,229	6,680,462	67.3
13-14	0.000174	99,222	17	99,214	6,581,234	66.3
14-15	0.000241	99,205	24	99,193	6,482,020	65.3
15-16	0.000314	99,181	31	99,166	6,382,827	64.4
16-17	0.000388	99,150	39	99,131	6,283,661	63.4
17-18	0.000473	99,112	47	99,088	6,184,530	62.4
18-19	0.000566	99,065	56	99,037	6,085,442	61.4
19-20	0.000660	99,009	65	98,976	5,986,405	60.5
20-21	0.000757	98,943	75	98,906	5,887,429	59.5
21-22	0.000846	98,868	84	98,827	5,788,523	58.5
22-23	0.000914	98,785	90	98,740	5,689,696	57.6
23-24	0.000958	98,694	95	98,647	5,590,957	56.6
24-25	0.000984	98,600	97	98,551	5,492,310	55.7
25-26	0.001004	98,503	99	98,454	5,393,758	54.8
26-27	0.001028	98,404	101	98,354	5,295,305	53.8
27-28	0.001056	98,303	104	98,251	5,196,951	52.9
28-29	0.001094	98,199	107	98,145	5,098,700	51.9
29-30	0.001138	98,092	112	98,036	5,000,555	51.0
30-31	0.001185	97,980	116	97,922	4,902,519	50.0
31-32	0.001232	97,864	121	97,804	4,804,597	49.1
32-33	0.001277	97,743	125	97,681	4,706,793	48.2
33-34	0.001318	97,619	129	97,554	4,609,112	47.2
34-35	0.001359	97,490	133	97,424	4,511,558	46.3
35-36	0.001408	97,357	137	97,289	4,414,134	45.3
36-37	0.001468	97,220	143	97,149	4,316,846	44.4
37-38	0.001535	97,077	149	97,003	4,219,697	43.5
38-39	0.001608	96,928	156	96,851	4,122,694	42.5
39-40	0.001690	96,773	164	96,691	4,025,843	41.6
40-41	0.001790	96,609	173	96,523	3,929,152	40.7
41-42	0.001909	96,436	184	96,344	3,832,630	39.7
42-43	0.002043	96,252	197	96,154	3,736,286	38.8
43-44	0.002191	96,055	210	95,950	3,640,132	37.9
44-45	0.002360	95,845	226	95,732	3,544,182	37.0
45-46	0.002541	95,619	243	95,497	3,448,450	36.1
46-47	0.002752	95,376	262	95,245	3,352,953	35.2
47-48	0.003018	95,113	287	94,970	3,257,708	34.3
48-49	0.003346	94,826	317	94,668	3,162,739	33.4
49-50	0.003717	94,509	351	94,333	3,068,071	32.5
50-51	0.004098	94,158	386	93,965	2,973,738	31.6
51-52	0.004481	93,772	420	93,562	2,879,773	30.7
52-53	0.004885	93,352	456	93,124	2,786,211	29.8
53-54	0.005319	92,896	494	92,649	2,693,088	29.0
54-55	0.005781	92,402	534	92,134	2,600,439	28.1
55-56	0.006271	91,867	576	91,579	2,508,304	27.3
56-57	0.006775	91,291	618	90,982	2,416,725	26.5
57-58	0.007291	90,673	661	90,342	2,325,743	25.6
58-59	0.007824	90,012	704	89,660	2,235,401	24.8
59-60	0.008383	89,307	749	88,933	2,145,741	24.0
60-61	0.008991	88,559	796	88,161	2,056,808	23.2

Table 1. Life table for total population: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table01.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.009652	87,763	847	87,339	1,968,648	22.4
62–63	0.010353	86,915	900	86,466	1,881,309	21.6
63–64	0.011081	86,016	953	85,539	1,794,843	20.9
64–65	0.011838	85,062	1,007	84,559	1,709,304	20.1
65–66	0.012634	84,055	1,062	83,524	1,624,745	19.3
66–67	0.013510	82,994	1,121	82,433	1,541,221	18.6
67–68	0.014504	81,872	1,187	81,278	1,458,788	17.8
68–69	0.015664	80,685	1,264	80,053	1,377,509	17.1
69–70	0.017059	79,421	1,355	78,744	1,297,456	16.3
70–71	0.018766	78,066	1,465	77,334	1,218,713	15.6
71–72	0.020689	76,601	1,585	75,809	1,141,379	14.9
72–73	0.022709	75,016	1,704	74,165	1,065,571	14.2
73–74	0.024795	73,313	1,818	72,404	991,406	13.5
74–75	0.027078	71,495	1,936	70,527	919,002	12.9
75–76	0.029614	69,559	2,060	68,529	848,475	12.2
76–77	0.032507	67,499	2,194	66,402	779,946	11.6
77–78	0.035786	65,305	2,337	64,136	713,544	10.9
78–79	0.039616	62,968	2,495	61,721	649,408	10.3
79–80	0.044017	60,473	2,662	59,142	587,687	9.7
80–81	0.048899	57,811	2,827	56,398	528,545	9.1
81–82	0.054283	54,985	2,985	53,492	472,147	8.6
82–83	0.060367	52,000	3,139	50,430	418,654	8.1
83–84	0.066954	48,861	3,271	47,225	368,224	7.5
84–85	0.074533	45,589	3,398	43,890	320,999	7.0
85–86	0.082695	42,192	3,489	40,447	277,108	6.6
86–87	0.092575	38,702	3,583	36,911	236,661	6.1
87–88	0.103427	35,120	3,632	33,303	199,750	5.7
88–89	0.115296	31,487	3,630	29,672	166,447	5.3
89–90	0.128216	27,857	3,572	26,071	136,775	4.9
90–91	0.142211	24,285	3,454	22,558	110,704	4.6
91–92	0.157287	20,832	3,277	19,193	88,145	4.2
92–93	0.173433	17,555	3,045	16,033	68,952	3.9
93–94	0.190616	14,510	2,766	13,127	52,919	3.6
94–95	0.208781	11,744	2,452	10,518	39,792	3.4
95–96	0.227849	9,292	2,117	8,234	29,273	3.2
96–97	0.247715	7,175	1,777	6,286	21,040	2.9
97–98	0.268255	5,398	1,448	4,674	14,753	2.7
98–99	0.289322	3,950	1,143	3,378	10,079	2.6
99–100	0.310753	2,807	872	2,371	6,701	2.4
100 and over	1.000000	1,935	1,935	4,330	4,330	2.2

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 2. Life table for males: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table02.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.006387	100,000	639	99,441	7,629,835	76.3
1-2	0.000452	99,361	45	99,339	7,530,394	75.8
2-3	0.000277	99,316	28	99,303	7,431,055	74.8
3-4	0.000224	99,289	22	99,278	7,331,753	73.8
4-5	0.000165	99,267	16	99,258	7,232,475	72.9
5-6	0.000164	99,250	16	99,242	7,133,217	71.9
6-7	0.000147	99,234	15	99,227	7,033,975	70.9
7-8	0.000132	99,219	13	99,213	6,934,748	69.9
8-9	0.000116	99,206	11	99,201	6,835,535	68.9
9-10	0.000100	99,195	10	99,190	6,736,335	67.9
10-11	0.000092	99,185	9	99,180	6,637,145	66.9
11-12	0.000100	99,176	10	99,171	6,537,965	65.9
12-13	0.000137	99,166	14	99,159	6,438,794	64.9
13-14	0.000208	99,152	21	99,142	6,339,635	63.9
14-15	0.000307	99,132	30	99,116	6,240,493	63.0
15-16	0.000411	99,101	41	99,081	6,141,377	62.0
16-17	0.000519	99,061	51	99,035	6,042,296	61.0
17-18	0.000646	99,009	64	98,977	5,943,261	60.0
18-19	0.000791	98,945	78	98,906	5,844,284	59.1
19-20	0.000941	98,867	93	98,820	5,745,378	58.1
20-21	0.001095	98,774	108	98,720	5,646,558	57.2
21-22	0.001233	98,666	122	98,605	5,547,838	56.2
22-23	0.001336	98,544	132	98,478	5,449,233	55.3
23-24	0.001396	98,412	137	98,344	5,350,755	54.4
24-25	0.001426	98,275	140	98,205	5,252,411	53.4
25-26	0.001445	98,135	142	98,064	5,154,207	52.5
26-27	0.001470	97,993	144	97,921	5,056,143	51.6
27-28	0.001497	97,849	147	97,776	4,958,222	50.7
28-29	0.001534	97,702	150	97,628	4,860,446	49.7
29-30	0.001577	97,553	154	97,476	4,762,819	48.8
30-31	0.001623	97,399	158	97,320	4,665,343	47.9
31-32	0.001667	97,241	162	97,160	4,568,023	47.0
32-33	0.001709	97,079	166	96,996	4,470,864	46.1
33-34	0.001750	96,913	170	96,828	4,373,868	45.1
34-35	0.001793	96,743	173	96,656	4,277,041	44.2
35-36	0.001845	96,569	178	96,480	4,180,384	43.3
36-37	0.001910	96,391	184	96,299	4,083,904	42.4
37-38	0.001979	96,207	190	96,112	3,987,605	41.4
38-39	0.002052	96,017	197	95,918	3,891,493	40.5
39-40	0.002134	95,820	205	95,718	3,795,574	39.6
40-41	0.002238	95,615	214	95,508	3,699,857	38.7
41-42	0.002367	95,401	226	95,288	3,604,348	37.8
42-43	0.002515	95,175	239	95,056	3,509,060	36.9
43-44	0.002684	94,936	255	94,809	3,414,004	36.0
44-45	0.002879	94,681	273	94,545	3,319,196	35.1
45-46	0.003089	94,409	292	94,263	3,224,651	34.2
46-47	0.003339	94,117	314	93,960	3,130,388	33.3
47-48	0.003662	93,803	344	93,631	3,036,428	32.4
48-49	0.004070	93,459	380	93,269	2,942,797	31.5
49-50	0.004537	93,079	422	92,868	2,849,528	30.6
50-51	0.005022	92,657	465	92,424	2,756,660	29.8
51-52	0.005510	92,191	508	91,937	2,664,236	28.9
52-53	0.006027	91,683	553	91,407	2,572,299	28.1
53-54	0.006583	91,131	600	90,831	2,480,892	27.2
54-55	0.007177	90,531	650	90,206	2,390,061	26.4
55-56	0.007801	89,881	701	89,530	2,299,855	25.6
56-57	0.008444	89,180	753	88,803	2,210,324	24.8
57-58	0.009116	88,427	806	88,024	2,121,521	24.0
58-59	0.009826	87,621	861	87,190	2,033,497	23.2
59-60	0.010584	86,760	918	86,301	1,946,307	22.4
60-61	0.011413	85,842	980	85,352	1,860,006	21.7

Table 2. Life table for males: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table02.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.012301	84,862	1,044	84,340	1,774,655	20.9
62–63	0.013202	83,818	1,107	83,265	1,690,315	20.2
63–64	0.014075	82,711	1,164	82,129	1,607,050	19.4
64–65	0.014931	81,547	1,218	80,938	1,524,921	18.7
65–66	0.015806	80,330	1,270	79,695	1,443,983	18.0
66–67	0.016783	79,060	1,327	78,396	1,364,288	17.3
67–68	0.017892	77,733	1,391	77,038	1,285,891	16.5
68–69	0.019205	76,342	1,466	75,609	1,208,854	15.8
69–70	0.020817	74,876	1,559	74,097	1,133,245	15.1
70–71	0.022804	73,317	1,672	72,481	1,059,148	14.4
71–72	0.025029	71,646	1,793	70,749	986,666	13.8
72–73	0.027354	69,852	1,911	68,897	915,917	13.1
73–74	0.029799	67,942	2,025	66,929	847,020	12.5
74–75	0.032458	65,917	2,140	64,847	780,091	11.8
75–76	0.035395	63,777	2,257	62,649	715,244	11.2
76–77	0.038808	61,520	2,387	60,326	652,595	10.6
77–78	0.042532	59,133	2,515	57,875	592,269	10.0
78–79	0.046850	56,618	2,653	55,291	534,394	9.4
79–80	0.051917	53,965	2,802	52,564	479,102	8.9
80–81	0.057631	51,163	2,949	49,689	426,538	8.3
81–82	0.064030	48,215	3,087	46,671	376,849	7.8
82–83	0.070871	45,128	3,198	43,528	330,178	7.3
83–84	0.078217	41,929	3,280	40,290	286,650	6.8
84–85	0.086915	38,650	3,359	36,970	246,360	6.4
85–86	0.096237	35,290	3,396	33,592	209,390	5.9
86–87	0.107643	31,894	3,433	30,178	175,798	5.5
87–88	0.120117	28,461	3,419	26,752	145,620	5.1
88–89	0.133690	25,042	3,348	23,368	118,868	4.7
89–90	0.148381	21,694	3,219	20,085	95,500	4.4
90–91	0.164189	18,475	3,033	16,959	75,415	4.1
91–92	0.181092	15,442	2,796	14,044	58,456	3.8
92–93	0.199046	12,646	2,517	11,387	44,413	3.5
93–94	0.217982	10,128	2,208	9,025	33,026	3.3
94–95	0.237802	7,921	1,884	6,979	24,001	3.0
95–96	0.258387	6,037	1,560	5,257	17,022	2.8
96–97	0.279592	4,477	1,252	3,851	11,765	2.6
97–98	0.301253	3,225	972	2,740	7,914	2.5
98–99	0.323192	2,254	728	1,890	5,174	2.3
99–100	0.345218	1,525	527	1,262	3,285	2.2
100 and over	1.000000	999	999	2,023	2,023	2.0

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 3. Life table for females: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table03.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.005377	100,000	538	99,527	8,111,178	81.1
1-2	0.000352	99,462	35	99,445	8,011,651	80.5
2-3	0.000227	99,427	23	99,416	7,912,206	79.6
3-4	0.000160	99,405	16	99,397	7,812,790	78.6
4-5	0.000125	99,389	12	99,383	7,713,393	77.6
5-6	0.000122	99,376	12	99,370	7,614,011	76.6
6-7	0.000109	99,364	11	99,359	7,514,640	75.6
7-8	0.000099	99,354	10	99,349	7,415,281	74.6
8-9	0.000093	99,344	9	99,339	7,315,933	73.6
9-10	0.000089	99,334	9	99,330	7,216,594	72.6
10-11	0.000089	99,326	9	99,321	7,117,264	71.7
11-12	0.000096	99,317	10	99,312	7,017,942	70.7
12-13	0.000112	99,307	11	99,302	6,918,631	69.7
13-14	0.000139	99,296	14	99,289	6,819,329	68.7
14-15	0.000173	99,282	17	99,274	6,720,040	67.7
15-16	0.000212	99,265	21	99,255	6,620,766	66.7
16-17	0.000252	99,244	25	99,232	6,521,512	65.7
17-18	0.000292	99,219	29	99,205	6,422,280	64.7
18-19	0.000330	99,190	33	99,174	6,323,075	63.7
19-20	0.000365	99,157	36	99,139	6,223,902	62.8
20-21	0.000401	99,121	40	99,101	6,124,762	61.8
21-22	0.000437	99,081	43	99,060	6,025,661	60.8
22-23	0.000469	99,038	46	99,015	5,926,601	59.8
23-24	0.000496	98,992	49	98,967	5,827,586	58.9
24-25	0.000520	98,943	51	98,917	5,728,619	57.9
25-26	0.000543	98,891	54	98,864	5,629,702	56.9
26-27	0.000569	98,838	56	98,809	5,530,838	56.0
27-28	0.000601	98,781	59	98,752	5,432,028	55.0
28-29	0.000641	98,722	63	98,690	5,333,277	54.0
29-30	0.000688	98,659	68	98,625	5,234,587	53.1
30-31	0.000739	98,591	73	98,554	5,135,962	52.1
31-32	0.000792	98,518	78	98,479	5,037,408	51.1
32-33	0.000841	98,440	83	98,398	4,938,929	50.2
33-34	0.000884	98,357	87	98,314	4,840,531	49.2
34-35	0.000924	98,270	91	98,225	4,742,217	48.3
35-36	0.000970	98,179	95	98,132	4,643,992	47.3
36-37	0.001027	98,084	101	98,034	4,545,861	46.3
37-38	0.001092	97,983	107	97,930	4,447,827	45.4
38-39	0.001166	97,876	114	97,819	4,349,897	44.4
39-40	0.001250	97,762	122	97,701	4,252,078	43.5
40-41	0.001347	97,640	132	97,574	4,154,377	42.5
41-42	0.001458	97,508	142	97,437	4,056,803	41.6
42-43	0.001578	97,366	154	97,290	3,959,365	40.7
43-44	0.001707	97,213	166	97,130	3,862,076	39.7
44-45	0.001849	97,047	179	96,957	3,764,946	38.8
45-46	0.002000	96,867	194	96,771	3,667,989	37.9
46-47	0.002173	96,674	210	96,569	3,571,218	36.9
47-48	0.002384	96,464	230	96,349	3,474,650	36.0
48-49	0.002636	96,234	254	96,107	3,378,301	35.1
49-50	0.002915	95,980	280	95,840	3,282,194	34.2
50-51	0.003199	95,700	306	95,547	3,186,354	33.3
51-52	0.003484	95,394	332	95,228	3,090,807	32.4
52-53	0.003783	95,062	360	94,882	2,995,579	31.5
53-54	0.004103	94,702	389	94,508	2,900,697	30.6
54-55	0.004443	94,314	419	94,104	2,806,190	29.8
55-56	0.004808	93,895	451	93,669	2,712,086	28.9
56-57	0.005185	93,443	485	93,201	2,618,417	28.0
57-58	0.005562	92,958	517	92,700	2,525,216	27.2
58-59	0.005936	92,441	549	92,167	2,432,516	26.3
59-60	0.006323	91,893	581	91,602	2,340,349	25.5
60-61	0.006739	91,312	615	91,004	2,248,747	24.6

Table 3. Life table for females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table03.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.007208	90,696	654	90,369	2,157,743	23.8
62–63	0.007742	90,043	697	89,694	2,067,373	23.0
63–64	0.008349	89,345	746	88,972	1,977,679	22.1
64–65	0.009024	88,599	800	88,200	1,888,707	21.3
65–66	0.009754	87,800	856	87,372	1,800,507	20.5
66–67	0.010550	86,944	917	86,485	1,713,136	19.7
67–68	0.011452	86,026	985	85,534	1,626,651	18.9
68–69	0.012489	85,041	1,062	84,510	1,541,117	18.1
69–70	0.013714	83,979	1,152	83,403	1,456,607	17.3
70–71	0.015204	82,827	1,259	82,198	1,373,204	16.6
71–72	0.016900	81,568	1,378	80,879	1,291,006	15.8
72–73	0.018696	80,190	1,499	79,440	1,210,127	15.1
73–74	0.020515	78,690	1,614	77,883	1,130,687	14.4
74–75	0.022528	77,076	1,736	76,208	1,052,804	13.7
75–76	0.024780	75,340	1,867	74,406	976,596	13.0
76–77	0.027308	73,473	2,006	72,470	902,190	12.3
77–78	0.030300	71,466	2,165	70,384	829,721	11.6
78–79	0.033840	69,301	2,345	68,128	759,337	11.0
79–80	0.037844	66,956	2,534	65,689	691,209	10.3
80–81	0.042223	64,422	2,720	63,062	625,520	9.7
81–82	0.047002	61,702	2,900	60,252	562,458	9.1
82–83	0.052739	58,802	3,101	57,251	502,206	8.5
83–84	0.059026	55,701	3,288	54,057	444,955	8.0
84–85	0.066100	52,413	3,464	50,681	390,898	7.5
85–86	0.073764	48,948	3,611	47,143	340,218	7.0
86–87	0.083117	45,338	3,768	43,454	293,075	6.5
87–88	0.093469	41,569	3,885	39,627	249,622	6.0
88–89	0.104878	37,684	3,952	35,708	209,995	5.6
89–90	0.117395	33,732	3,960	31,752	174,287	5.2
90–91	0.131057	29,772	3,902	27,821	142,535	4.8
91–92	0.145887	25,870	3,774	23,983	114,714	4.4
92–93	0.161887	22,096	3,577	20,307	90,731	4.1
93–94	0.179040	18,519	3,316	16,861	70,424	3.8
94–95	0.197299	15,203	3,000	13,703	53,563	3.5
95–96	0.216593	12,204	2,643	10,882	39,860	3.3
96–97	0.236822	9,560	2,264	8,428	28,978	3.0
97–98	0.257858	7,296	1,881	6,356	20,549	2.8
98–99	0.279548	5,415	1,514	4,658	14,194	2.6
99–100	0.301715	3,901	1,177	3,313	9,535	2.4
100 and over	1.000000	2,724	2,724	6,223	6,223	2.3

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 4. Life table for white population: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table04.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004922	100,000	492	99,566	7,891,540	78.9
1-2	0.000358	99,508	36	99,490	7,791,974	78.3
2-3	0.000224	99,472	22	99,461	7,692,484	77.3
3-4	0.000177	99,450	18	99,441	7,593,023	76.4
4-5	0.000133	99,432	13	99,426	7,493,582	75.4
5-6	0.000130	99,419	13	99,412	7,394,156	74.4
6-7	0.000117	99,406	12	99,400	7,294,744	73.4
7-8	0.000107	99,394	11	99,389	7,195,344	72.4
8-9	0.000097	99,384	10	99,379	7,095,955	71.4
9-10	0.000089	99,374	9	99,370	6,996,576	70.4
10-11	0.000087	99,365	9	99,361	6,897,206	69.4
11-12	0.000095	99,357	9	99,352	6,797,845	68.4
12-13	0.000121	99,347	12	99,341	6,698,493	67.4
13-14	0.000167	99,335	17	99,327	6,599,152	66.4
14-15	0.000229	99,319	23	99,307	6,499,825	65.4
15-16	0.000296	99,296	29	99,281	6,400,518	64.5
16-17	0.000366	99,266	36	99,248	6,301,237	63.5
17-18	0.000445	99,230	44	99,208	6,201,989	62.5
18-19	0.000532	99,186	53	99,160	6,102,781	61.5
19-20	0.000621	99,133	62	99,102	6,003,621	60.6
20-21	0.000713	99,072	71	99,036	5,904,518	59.6
21-22	0.000799	99,001	79	98,961	5,805,482	58.6
22-23	0.000868	98,922	86	98,879	5,706,521	57.7
23-24	0.000916	98,836	90	98,791	5,607,642	56.7
24-25	0.000948	98,745	94	98,699	5,508,851	55.8
25-26	0.000975	98,652	96	98,604	5,410,152	54.8
26-27	0.001006	98,556	99	98,506	5,311,549	53.9
27-28	0.001040	98,457	102	98,405	5,213,043	52.9
28-29	0.001081	98,354	106	98,301	5,114,637	52.0
29-30	0.001127	98,248	111	98,192	5,016,336	51.1
30-31	0.001177	98,137	115	98,079	4,918,144	50.1
31-32	0.001225	98,022	120	97,961	4,820,065	49.2
32-33	0.001270	97,901	124	97,839	4,722,103	48.2
33-34	0.001308	97,777	128	97,713	4,624,264	47.3
34-35	0.001344	97,649	131	97,584	4,526,551	46.4
35-36	0.001387	97,518	135	97,450	4,428,967	45.4
36-37	0.001442	97,383	140	97,313	4,331,517	44.5
37-38	0.001505	97,242	146	97,169	4,234,204	43.5
38-39	0.001576	97,096	153	97,020	4,137,035	42.6
39-40	0.001657	96,943	161	96,863	4,040,015	41.7
40-41	0.001758	96,782	170	96,697	3,943,153	40.7
41-42	0.001877	96,612	181	96,522	3,846,455	39.8
42-43	0.002009	96,431	194	96,334	3,749,934	38.9
43-44	0.002154	96,237	207	96,134	3,653,599	38.0
44-45	0.002316	96,030	222	95,919	3,557,466	37.0
45-46	0.002489	95,808	238	95,688	3,461,547	36.1
46-47	0.002691	95,569	257	95,441	3,365,859	35.2
47-48	0.002951	95,312	281	95,171	3,270,418	34.3
48-49	0.003276	95,031	311	94,875	3,175,247	33.4
49-50	0.003644	94,719	345	94,547	3,080,372	32.5
50-51	0.004022	94,374	380	94,184	2,985,825	31.6
51-52	0.004398	93,995	413	93,788	2,891,641	30.8
52-53	0.004791	93,581	448	93,357	2,797,853	29.9
53-54	0.005206	93,133	485	92,890	2,704,496	29.0
54-55	0.005646	92,648	523	92,386	2,611,605	28.2
55-56	0.006113	92,125	563	91,843	2,519,219	27.3
56-57	0.006596	91,562	604	91,260	2,427,376	26.5
57-58	0.007089	90,958	645	90,635	2,336,116	25.7
58-59	0.007592	90,313	686	89,970	2,245,480	24.9
59-60	0.008121	89,627	728	89,263	2,155,510	24.0

Table 4. Life table for white population: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table04.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
60–61	0.008691	88,900	773	88,513	2,066,247	23.2
61–62	0.009319	88,127	821	87,716	1,977,734	22.4
62–63	0.010004	87,306	873	86,869	1,890,017	21.6
63–64	0.010742	86,432	928	85,968	1,803,148	20.9
64–65	0.011528	85,504	986	85,011	1,717,180	20.1
65–66	0.012360	84,518	1,045	83,996	1,632,169	19.3
66–67	0.013273	83,473	1,108	82,919	1,548,174	18.5
67–68	0.014300	82,366	1,178	81,777	1,465,254	17.8
68–69	0.015482	81,188	1,257	80,559	1,383,478	17.0
69–70	0.016888	79,931	1,350	79,256	1,302,918	16.3
70–71	0.018605	78,581	1,462	77,850	1,223,663	15.6
71–72	0.020544	77,119	1,584	76,327	1,145,813	14.9
72–73	0.022578	75,535	1,705	74,682	1,069,486	14.2
73–74	0.024676	73,829	1,822	72,918	994,804	13.5
74–75	0.026975	72,007	1,942	71,036	921,886	12.8
75–76	0.029542	70,065	2,070	69,030	850,850	12.1
76–77	0.032483	67,995	2,209	66,891	781,820	11.5
77–78	0.035824	65,786	2,357	64,608	714,929	10.9
78–79	0.039728	63,430	2,520	62,170	650,321	10.3
79–80	0.044201	60,910	2,692	59,564	588,151	9.7
80–81	0.049154	58,217	2,862	56,787	528,588	9.1
81–82	0.054608	55,356	3,023	53,844	471,801	8.5
82–83	0.060786	52,333	3,181	50,742	417,957	8.0
83–84	0.067545	49,152	3,320	47,492	367,214	7.5
84–85	0.075300	45,832	3,451	44,106	319,722	7.0
85–86	0.083060	42,381	3,520	40,621	275,616	6.5
86–87	0.093216	38,861	3,622	37,049	234,995	6.0
87–88	0.104391	35,238	3,679	33,399	197,946	5.6
88–89	0.116633	31,560	3,681	29,719	164,547	5.2
89–90	0.129979	27,879	3,624	26,067	134,828	4.8
90–91	0.144451	24,255	3,504	22,503	108,761	4.5
91–92	0.160055	20,751	3,321	19,091	86,257	4.2
92–93	0.176773	17,430	3,081	15,889	67,167	3.9
93–94	0.194566	14,349	2,792	12,953	51,277	3.6
94–95	0.213371	11,557	2,466	10,324	38,324	3.3
95–96	0.233095	9,091	2,119	8,032	28,000	3.1
96–97	0.253623	6,972	1,768	6,088	19,968	2.9
97–98	0.274813	5,204	1,430	4,489	13,880	2.7
98–99	0.296502	3,774	1,119	3,214	9,392	2.5
99–100	0.318512	2,655	846	2,232	6,177	2.3
100 and over	1.000000	1,809	1,809	3,945	3,945	2.2

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 5. Life table for white males: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table05.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.005334	100,000	533	99,531	7,657,279	76.6
1-2	0.000391	99,467	39	99,447	7,557,749	76.0
2-3	0.000243	99,428	24	99,416	7,458,302	75.0
3-4	0.000209	99,403	21	99,393	7,358,886	74.0
4-5	0.000151	99,383	15	99,375	7,259,493	73.0
5-6	0.000150	99,368	15	99,360	7,160,118	72.1
6-7	0.000135	99,353	13	99,346	7,060,757	71.1
7-8	0.000121	99,339	12	99,333	6,961,411	70.1
8-9	0.000108	99,327	11	99,322	6,862,078	69.1
9-10	0.000095	99,317	9	99,312	6,762,756	68.1
10-11	0.000090	99,307	9	99,303	6,663,444	67.1
11-12	0.000099	99,298	10	99,293	6,564,141	66.1
12-13	0.000133	99,289	13	99,282	6,464,847	65.1
13-14	0.000196	99,275	19	99,266	6,365,565	64.1
14-15	0.000283	99,256	28	99,242	6,266,300	63.1
15-16	0.000375	99,228	37	99,209	6,167,058	62.2
16-17	0.000472	99,191	47	99,167	6,067,849	61.2
17-18	0.000587	99,144	58	99,115	5,968,681	60.2
18-19	0.000722	99,086	72	99,050	5,869,567	59.2
19-20	0.000865	99,014	86	98,971	5,770,517	58.3
20-21	0.001013	98,928	100	98,878	5,671,546	57.3
21-22	0.001148	98,828	113	98,771	5,572,667	56.4
22-23	0.001252	98,715	124	98,653	5,473,896	55.5
23-24	0.001318	98,591	130	98,526	5,375,243	54.5
24-25	0.001356	98,461	133	98,394	5,276,717	53.6
25-26	0.001384	98,328	136	98,260	5,178,322	52.7
26-27	0.001417	98,192	139	98,122	5,080,063	51.7
27-28	0.001453	98,053	142	97,981	4,981,941	50.8
28-29	0.001496	97,910	146	97,837	4,883,959	49.9
29-30	0.001545	97,764	151	97,688	4,786,123	49.0
30-31	0.001596	97,612	156	97,535	4,688,435	48.0
31-32	0.001645	97,457	160	97,377	4,590,900	47.1
32-33	0.001689	97,296	164	97,214	4,493,523	46.2
33-34	0.001726	97,132	168	97,048	4,396,309	45.3
34-35	0.001761	96,964	171	96,879	4,299,261	44.3
35-36	0.001804	96,794	175	96,706	4,202,382	43.4
36-37	0.001860	96,619	180	96,529	4,105,675	42.5
37-38	0.001924	96,439	186	96,347	4,009,146	41.6
38-39	0.001997	96,254	192	96,158	3,912,800	40.7
39-40	0.002082	96,062	200	95,962	3,816,642	39.7
40-41	0.002190	95,862	210	95,757	3,720,680	38.8
41-42	0.002323	95,652	222	95,541	3,624,924	37.9
42-43	0.002472	95,429	236	95,312	3,529,383	37.0
43-44	0.002637	95,194	251	95,068	3,434,072	36.1
44-45	0.002825	94,943	268	94,808	3,339,004	35.2
45-46	0.003027	94,674	287	94,531	3,244,195	34.3
46-47	0.003268	94,388	308	94,233	3,149,664	33.4
47-48	0.003585	94,079	337	93,911	3,055,431	32.5
48-49	0.003990	93,742	374	93,555	2,961,520	31.6
49-50	0.004456	93,368	416	93,160	2,867,965	30.7
50-51	0.004938	92,952	459	92,722	2,774,805	29.9
51-52	0.005420	92,493	501	92,242	2,682,083	29.0
52-53	0.005924	91,992	545	91,719	2,589,840	28.2
53-54	0.006458	91,447	591	91,151	2,498,121	27.3
54-55	0.007023	90,856	638	90,537	2,406,970	26.5
55-56	0.007618	90,218	687	89,874	2,316,432	25.7
56-57	0.008233	89,531	737	89,162	2,226,558	24.9
57-58	0.008871	88,794	788	88,400	2,137,396	24.1
58-59	0.009538	88,006	839	87,586	2,048,996	23.3
59-60	0.010246	87,167	893	86,720	1,961,409	22.5
60-61	0.011016	86,274	950	85,798	1,874,689	21.7

Table 5. Life table for white males: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table05.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.011847	85,323	1,011	84,818	1,788,891	21.0
62–63	0.012712	84,312	1,072	83,776	1,704,073	20.2
63–64	0.013583	83,241	1,131	82,675	1,620,297	19.5
64–65	0.014465	82,110	1,188	81,516	1,537,621	18.7
65–66	0.015374	80,922	1,244	80,300	1,456,105	18.0
66–67	0.016390	79,678	1,306	79,025	1,375,805	17.3
67–68	0.017538	78,372	1,375	77,685	1,296,780	16.5
68–69	0.018881	76,998	1,454	76,271	1,219,095	15.8
69–70	0.020503	75,544	1,549	74,769	1,142,825	15.1
70–71	0.022495	73,995	1,665	73,163	1,068,055	14.4
71–72	0.024724	72,330	1,788	71,436	994,892	13.8
72–73	0.027057	70,542	1,909	69,588	923,456	13.1
73–74	0.029522	68,633	2,026	67,620	853,869	12.4
74–75	0.032194	66,607	2,144	65,535	786,248	11.8
75–76	0.035141	64,463	2,265	63,330	720,713	11.2
76–77	0.038613	62,198	2,402	60,997	657,383	10.6
77–78	0.042416	59,796	2,536	58,528	596,386	10.0
78–79	0.046818	57,260	2,681	55,919	537,858	9.4
79–80	0.051959	54,579	2,836	53,161	481,939	8.8
80–81	0.057717	51,743	2,986	50,250	428,778	8.3
81–82	0.064257	48,757	3,133	47,190	378,528	7.8
82–83	0.071268	45,624	3,252	43,998	331,338	7.3
83–84	0.078839	42,372	3,341	40,702	287,340	6.8
84–85	0.087715	39,032	3,424	37,320	246,638	6.3
85–86	0.096118	35,608	3,423	33,897	209,318	5.9
86–87	0.107931	32,185	3,474	30,448	175,422	5.5
87–88	0.120888	28,712	3,471	26,976	144,973	5.0
88–89	0.135026	25,241	3,408	23,537	117,997	4.7
89–90	0.150360	21,833	3,283	20,191	94,461	4.3
90–91	0.166890	18,550	3,096	17,002	74,270	4.0
91–92	0.184587	15,454	2,853	14,028	57,268	3.7
92–93	0.203397	12,601	2,563	11,320	43,240	3.4
93–94	0.223237	10,038	2,241	8,918	31,920	3.2
94–95	0.243992	7,797	1,902	6,846	23,002	3.0
95–96	0.265522	5,895	1,565	5,112	16,156	2.7
96–97	0.287658	4,330	1,245	3,707	11,044	2.6
97–98	0.310213	3,084	957	2,606	7,337	2.4
98–99	0.332982	2,127	708	1,773	4,731	2.2
99–100	0.355755	1,419	505	1,167	2,958	2.1
100 and over	1.000000	914	914	1,791	1,791	2.0

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 6. Life table for white females: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table06.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004490	100,000	449	99,603	8,125,924	81.3
1-2	0.000322	99,551	32	99,535	8,026,321	80.6
2-3	0.000204	99,519	20	99,509	7,926,786	79.7
3-4	0.000144	99,499	14	99,491	7,827,277	78.7
4-5	0.000115	99,484	11	99,479	7,727,786	77.7
5-6	0.000110	99,473	11	99,467	7,628,308	76.7
6-7	0.000099	99,462	10	99,457	7,528,840	75.7
7-8	0.000091	99,452	9	99,447	7,429,383	74.7
8-9	0.000086	99,443	9	99,439	7,329,936	73.7
9-10	0.000083	99,434	8	99,430	7,230,497	72.7
10-11	0.000084	99,426	8	99,422	7,131,067	71.7
11-12	0.000091	99,418	9	99,413	7,031,645	70.7
12-13	0.000108	99,409	11	99,403	6,932,232	69.7
13-14	0.000136	99,398	14	99,391	6,832,829	68.7
14-15	0.000173	99,384	17	99,376	6,733,438	67.8
15-16	0.000214	99,367	21	99,357	6,634,062	66.8
16-17	0.000255	99,346	25	99,333	6,534,705	65.8
17-18	0.000295	99,321	29	99,306	6,435,372	64.8
18-19	0.000331	99,291	33	99,275	6,336,066	63.8
19-20	0.000363	99,258	36	99,240	6,236,791	62.8
20-21	0.000396	99,222	39	99,203	6,137,551	61.9
21-22	0.000429	99,183	43	99,162	6,038,348	60.9
22-23	0.000460	99,141	46	99,118	5,939,186	59.9
23-24	0.000489	99,095	48	99,071	5,840,068	58.9
24-25	0.000516	99,047	51	99,021	5,740,997	58.0
25-26	0.000543	98,995	54	98,969	5,641,976	57.0
26-27	0.000573	98,942	57	98,913	5,543,008	56.0
27-28	0.000607	98,885	60	98,855	5,444,094	55.1
28-29	0.000646	98,825	64	98,793	5,345,239	54.1
29-30	0.000691	98,761	68	98,727	5,246,446	53.1
30-31	0.000740	98,693	73	98,656	5,147,719	52.2
31-32	0.000790	98,620	78	98,581	5,049,063	51.2
32-33	0.000836	98,542	82	98,501	4,950,482	50.2
33-34	0.000875	98,460	86	98,417	4,851,981	49.3
34-35	0.000913	98,374	90	98,329	4,753,564	48.3
35-36	0.000957	98,284	94	98,237	4,655,236	47.4
36-37	0.001011	98,190	99	98,140	4,556,999	46.4
37-38	0.001072	98,090	105	98,038	4,458,859	45.5
38-39	0.001143	97,985	112	97,929	4,360,821	44.5
39-40	0.001223	97,873	120	97,813	4,262,892	43.6
40-41	0.001317	97,754	129	97,689	4,165,078	42.6
41-42	0.001424	97,625	139	97,555	4,067,389	41.7
42-43	0.001540	97,486	150	97,411	3,969,834	40.7
43-44	0.001664	97,336	162	97,255	3,872,423	39.8
44-45	0.001800	97,174	175	97,086	3,775,169	38.8
45-46	0.001944	96,999	189	96,904	3,678,082	37.9
46-47	0.002108	96,810	204	96,708	3,581,178	37.0
47-48	0.002312	96,606	223	96,494	3,484,470	36.1
48-49	0.002558	96,383	247	96,260	3,387,975	35.2
49-50	0.002832	96,136	272	96,000	3,291,716	34.2
50-51	0.003110	95,864	298	95,715	3,195,716	33.3
51-52	0.003387	95,566	324	95,404	3,100,001	32.4
52-53	0.003675	95,242	350	95,067	3,004,596	31.5
53-54	0.003978	94,892	377	94,704	2,909,529	30.7
54-55	0.004298	94,515	406	94,312	2,814,826	29.8
55-56	0.004645	94,109	437	93,890	2,720,514	28.9
56-57	0.005005	93,671	469	93,437	2,626,624	28.0
57-58	0.005364	93,203	500	92,953	2,533,187	27.2
58-59	0.005719	92,703	530	92,438	2,440,234	26.3
59-60	0.006086	92,173	561	91,892	2,347,797	25.5
60-61	0.006481	91,612	594	91,315	2,255,905	24.6

Table 6. Life table for white females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table06.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.006932	91,018	631	90,702	2,164,590	23.8
62–63	0.007463	90,387	675	90,050	2,073,888	22.9
63–64	0.008087	89,712	726	89,350	1,983,838	22.1
64–65	0.008793	88,987	782	88,596	1,894,489	21.3
65–66	0.009559	88,204	843	87,783	1,805,893	20.5
66–67	0.010392	87,361	908	86,907	1,718,110	19.7
67–68	0.011324	86,453	979	85,964	1,631,203	18.9
68–69	0.012375	85,474	1,058	84,945	1,545,239	18.1
69–70	0.013609	84,417	1,149	83,842	1,460,294	17.3
70–71	0.015109	83,268	1,258	82,639	1,376,452	16.5
71–72	0.016826	82,010	1,380	81,320	1,293,813	15.8
72–73	0.018640	80,630	1,503	79,878	1,212,493	15.0
73–74	0.020462	79,127	1,619	78,317	1,132,615	14.3
74–75	0.022488	77,508	1,743	76,636	1,054,298	13.6
75–76	0.024788	75,765	1,878	74,826	977,661	12.9
76–77	0.027349	73,887	2,021	72,876	902,836	12.2
77–78	0.030387	71,866	2,184	70,774	829,959	11.5
78–79	0.033989	69,682	2,368	68,498	759,185	10.9
79–80	0.038056	67,314	2,562	66,033	690,687	10.3
80–81	0.042516	64,752	2,753	63,376	624,655	9.6
81–82	0.047296	61,999	2,932	60,533	561,279	9.1
82–83	0.053060	59,067	3,134	57,500	500,746	8.5
83–84	0.059473	55,933	3,327	54,269	443,246	7.9
84–85	0.066710	52,606	3,509	50,852	388,977	7.4
85–86	0.074079	49,097	3,637	47,278	338,125	6.9
86–87	0.083663	45,460	3,803	43,558	290,847	6.4
87–88	0.094291	41,656	3,928	39,693	247,289	5.9
88–89	0.106022	37,729	4,000	35,729	207,596	5.5
89–90	0.118910	33,729	4,011	31,723	171,868	5.1
90–91	0.132993	29,718	3,952	27,742	140,145	4.7
91–92	0.148293	25,766	3,821	23,855	112,403	4.4
92–93	0.164809	21,945	3,617	20,136	88,548	4.0
93–94	0.182516	18,328	3,345	16,655	68,411	3.7
94–95	0.201363	14,983	3,017	13,474	51,756	3.5
95–96	0.221267	11,966	2,648	10,642	38,281	3.2
96–97	0.242114	9,318	2,256	8,190	27,639	3.0
97–98	0.263762	7,062	1,863	6,131	19,449	2.8
98–99	0.286042	5,199	1,487	4,456	13,318	2.6
99–100	0.308762	3,712	1,146	3,139	8,862	2.4
100 and over	1.000000	2,566	2,566	5,723	5,723	2.2

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 7. Life table for black population: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table07.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.011387	100,000	1,139	99,008	7,547,378	75.5
1-2	0.000654	98,861	65	98,829	7,448,370	75.3
2-3	0.000381	98,797	38	98,778	7,349,541	74.4
3-4	0.000295	98,759	29	98,744	7,250,763	73.4
4-5	0.000224	98,730	22	98,719	7,152,019	72.4
5-6	0.000213	98,708	21	98,697	7,053,300	71.5
6-7	0.000186	98,687	18	98,678	6,954,603	70.5
7-8	0.000164	98,668	16	98,660	6,855,925	69.5
8-9	0.000144	98,652	14	98,645	6,757,265	68.5
9-10	0.000126	98,638	12	98,632	6,658,620	67.5
10-11	0.000117	98,626	12	98,620	6,559,988	66.5
11-12	0.000125	98,614	12	98,608	6,461,369	65.5
12-13	0.000163	98,602	16	98,594	6,362,761	64.5
13-14	0.000235	98,586	23	98,574	6,264,167	63.5
14-15	0.000334	98,562	33	98,546	6,165,593	62.6
15-16	0.000439	98,529	43	98,508	6,067,047	61.6
16-17	0.000546	98,486	54	98,459	5,968,539	60.6
17-18	0.000670	98,433	66	98,400	5,870,080	59.6
18-19	0.000808	98,367	79	98,327	5,771,680	58.7
19-20	0.000947	98,287	93	98,241	5,673,353	57.7
20-21	0.001087	98,194	107	98,141	5,575,113	56.8
21-22	0.001211	98,087	119	98,028	5,476,972	55.8
22-23	0.001301	97,968	127	97,905	5,378,944	54.9
23-24	0.001353	97,841	132	97,775	5,281,040	54.0
24-25	0.001378	97,709	135	97,641	5,183,265	53.0
25-26	0.001396	97,574	136	97,506	5,085,624	52.1
26-27	0.001420	97,438	138	97,369	4,988,118	51.2
27-28	0.001451	97,299	141	97,229	4,890,749	50.3
28-29	0.001494	97,158	145	97,086	4,793,520	49.3
29-30	0.001549	97,013	150	96,938	4,696,435	48.4
30-31	0.001608	96,863	156	96,785	4,599,497	47.5
31-32	0.001669	96,707	161	96,626	4,502,712	46.6
32-33	0.001737	96,546	168	96,462	4,406,085	45.6
33-34	0.001811	96,378	175	96,291	4,309,623	44.7
34-35	0.001891	96,203	182	96,112	4,213,333	43.8
35-36	0.001983	96,021	190	95,926	4,117,220	42.9
36-37	0.002085	95,831	200	95,731	4,021,294	42.0
37-38	0.002191	95,631	210	95,526	3,925,563	41.0
38-39	0.002300	95,422	220	95,312	3,830,036	40.1
39-40	0.002417	95,202	230	95,087	3,734,725	39.2
40-41	0.002557	94,972	243	94,851	3,639,638	38.3
41-42	0.002720	94,729	258	94,600	3,544,787	37.4
42-43	0.002899	94,471	274	94,335	3,450,187	36.5
43-44	0.003094	94,198	291	94,052	3,355,852	35.6
44-45	0.003312	93,906	311	93,751	3,261,800	34.7
45-46	0.003547	93,595	332	93,429	3,168,050	33.8
46-47	0.003825	93,263	357	93,085	3,074,620	33.0
47-48	0.004175	92,906	388	92,712	2,981,536	32.1
48-49	0.004609	92,518	426	92,305	2,888,823	31.2
49-50	0.005104	92,092	470	91,857	2,796,518	30.4
50-51	0.005610	91,622	514	91,365	2,704,661	29.5
51-52	0.006127	91,108	558	90,829	2,613,296	28.7
52-53	0.006702	90,550	607	90,246	2,522,467	27.9
53-54	0.007357	89,943	662	89,612	2,432,221	27.0
54-55	0.008081	89,281	722	88,920	2,342,609	26.2
55-56	0.008840	88,560	783	88,168	2,253,688	25.4
56-57	0.009611	87,777	844	87,355	2,165,520	24.7
57-58	0.010421	86,933	906	86,480	2,078,165	23.9
58-59	0.011286	86,027	971	85,542	1,991,684	23.2
59-60	0.012214	85,056	1,039	84,537	1,906,143	22.4
60-61	0.013252	84,017	1,113	83,461	1,821,606	21.7

Table 7. Life table for black population: United States, 2015 —Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table07.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.014355	82,904	1,190	82,309	1,738,145	21.0
62–63	0.015412	81,714	1,259	81,084	1,655,836	20.3
63–64	0.016337	80,455	1,314	79,797	1,574,752	19.6
64–65	0.017159	79,140	1,358	78,461	1,494,955	18.9
65–66	0.017980	77,782	1,398	77,083	1,416,493	18.2
66–67	0.018926	76,384	1,446	75,661	1,339,410	17.5
67–68	0.020017	74,938	1,500	74,188	1,263,750	16.9
68–69	0.021352	73,438	1,568	72,654	1,189,562	16.2
69–70	0.022958	71,870	1,650	71,045	1,116,908	15.5
70–71	0.024891	70,220	1,748	69,346	1,045,863	14.9
71–72	0.027013	68,472	1,850	67,547	976,516	14.3
72–73	0.029216	66,623	1,946	65,649	908,969	13.6
73–74	0.031566	64,676	2,042	63,655	843,320	13.0
74–75	0.034114	62,634	2,137	61,566	779,665	12.4
75–76	0.036758	60,498	2,224	59,386	718,098	11.9
76–77	0.039567	58,274	2,306	57,121	658,713	11.3
77–78	0.042775	55,968	2,394	54,771	601,591	10.7
78–79	0.046524	53,574	2,492	52,328	546,820	10.2
79–80	0.050561	51,082	2,583	49,790	494,492	9.7
80–81	0.055076	48,499	2,671	47,163	444,702	9.2
81–82	0.060116	45,828	2,755	44,450	397,538	8.7
82–83	0.065429	43,073	2,818	41,664	353,088	8.2
83–84	0.070931	40,255	2,855	38,827	311,424	7.7
84–85	0.077793	37,399	2,909	35,945	272,597	7.3
85–86	0.085431	34,490	2,947	33,017	236,653	6.9
86–87	0.093549	31,543	2,951	30,068	203,636	6.5
87–88	0.102303	28,593	2,925	27,130	173,568	6.1
88–89	0.111716	25,667	2,867	24,234	146,438	5.7
89–90	0.121808	22,800	2,777	21,411	122,204	5.4
90–91	0.132594	20,023	2,655	18,695	100,793	5.0
91–92	0.144083	17,368	2,502	16,117	82,098	4.7
92–93	0.156276	14,865	2,323	13,704	65,981	4.4
93–94	0.169166	12,542	2,122	11,481	52,277	4.2
94–95	0.182740	10,421	1,904	9,468	40,795	3.9
95–96	0.196971	8,516	1,677	7,678	31,327	3.7
96–97	0.211825	6,839	1,449	6,115	23,649	3.5
97–98	0.227258	5,390	1,225	4,778	17,535	3.3
98–99	0.243213	4,165	1,013	3,659	12,757	3.1
99–100	0.259627	3,152	818	2,743	9,098	2.9
100 and over	1.000000	2,334	2,334	6,355	6,355	2.7

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 8. Life table for black males: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table08.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.012403	100,000	1,240	98,920	7,224,187	72.2
1-2	0.000775	98,760	77	98,721	7,125,267	72.1
2-3	0.000437	98,683	43	98,662	7,026,546	71.2
3-4	0.000346	98,640	34	98,623	6,927,884	70.2
4-5	0.000261	98,606	26	98,593	6,829,261	69.3
5-6	0.000244	98,580	24	98,568	6,730,668	68.3
6-7	0.000214	98,556	21	98,546	6,632,100	67.3
7-8	0.000187	98,535	18	98,526	6,533,555	66.3
8-9	0.000158	98,517	16	98,509	6,435,029	65.3
9-10	0.000128	98,501	13	98,495	6,336,520	64.3
10-11	0.000109	98,488	11	98,483	6,238,025	63.3
11-12	0.000119	98,478	12	98,472	6,139,542	62.3
12-13	0.000178	98,466	18	98,457	6,041,070	61.4
13-14	0.000298	98,448	29	98,434	5,942,613	60.4
14-15	0.000465	98,419	46	98,396	5,844,179	59.4
15-16	0.000639	98,373	63	98,342	5,745,783	58.4
16-17	0.000814	98,310	80	98,270	5,647,441	57.4
17-18	0.001014	98,230	100	98,181	5,549,171	56.5
18-19	0.001233	98,131	121	98,070	5,450,990	55.5
19-20	0.001449	98,010	142	97,939	5,352,920	54.6
20-21	0.001664	97,868	163	97,786	5,254,981	53.7
21-22	0.001852	97,705	181	97,614	5,157,195	52.8
22-23	0.001987	97,524	194	97,427	5,059,580	51.9
23-24	0.002061	97,330	201	97,230	4,962,153	51.0
24-25	0.002092	97,130	203	97,028	4,864,924	50.1
25-26	0.002110	96,926	204	96,824	4,767,896	49.2
26-27	0.002134	96,722	206	96,619	4,671,072	48.3
27-28	0.002162	96,515	209	96,411	4,574,453	47.4
28-29	0.002201	96,307	212	96,201	4,478,042	46.5
29-30	0.002251	96,095	216	95,987	4,381,841	45.6
30-31	0.002300	95,878	221	95,768	4,285,855	44.7
31-32	0.002350	95,658	225	95,545	4,190,087	43.8
32-33	0.002412	95,433	230	95,318	4,094,541	42.9
33-34	0.002491	95,203	237	95,084	3,999,223	42.0
34-35	0.002584	94,966	245	94,843	3,904,139	41.1
35-36	0.002694	94,720	255	94,593	3,809,296	40.2
36-37	0.002811	94,465	266	94,332	3,714,703	39.3
37-38	0.002923	94,200	275	94,062	3,620,371	38.4
38-39	0.003023	93,924	284	93,782	3,526,309	37.5
39-40	0.003123	93,640	292	93,494	3,432,527	36.7
40-41	0.003246	93,348	303	93,196	3,339,033	35.8
41-42	0.003405	93,045	317	92,886	3,245,837	34.9
42-43	0.003586	92,728	333	92,562	3,152,950	34.0
43-44	0.003793	92,395	350	92,220	3,060,388	33.1
44-45	0.004034	92,045	371	91,859	2,968,168	32.2
45-46	0.004298	91,674	394	91,477	2,876,309	31.4
46-47	0.004616	91,280	421	91,069	2,784,832	30.5
47-48	0.005034	90,858	457	90,630	2,693,763	29.6
48-49	0.005569	90,401	503	90,149	2,603,134	28.8
49-50	0.006192	89,897	557	89,619	2,512,985	28.0
50-51	0.006838	89,341	611	89,035	2,423,365	27.1
51-52	0.007501	88,730	666	88,397	2,334,330	26.3
52-53	0.008234	88,064	725	87,702	2,245,933	25.5
53-54	0.009061	87,339	791	86,944	2,158,231	24.7
54-55	0.009974	86,548	863	86,116	2,071,288	23.9
55-56	0.010924	85,685	936	85,217	1,985,171	23.2
56-57	0.011901	84,749	1,009	84,244	1,899,955	22.4
57-58	0.012971	83,740	1,086	83,197	1,815,711	21.7
58-59	0.014175	82,654	1,172	82,068	1,732,514	21.0
59-60	0.015518	81,482	1,264	80,850	1,650,445	20.3
60-61	0.017050	80,218	1,368	79,534	1,569,595	19.6

Table 8. Life table for black males: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table08.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.018673	78,850	1,472	78,114	1,490,061	18.9
62–63	0.020196	77,378	1,563	76,596	1,411,947	18.2
63–64	0.021452	75,815	1,626	75,002	1,335,351	17.6
64–65	0.022478	74,189	1,668	73,355	1,260,349	17.0
65–66	0.023464	72,521	1,702	71,670	1,186,994	16.4
66–67	0.024623	70,820	1,744	69,948	1,115,324	15.7
67–68	0.025942	69,076	1,792	68,180	1,045,376	15.1
68–69	0.027520	67,284	1,852	66,358	977,196	14.5
69–70	0.029441	65,432	1,926	64,469	910,838	13.9
70–71	0.031797	63,506	2,019	62,496	846,369	13.3
71–72	0.034416	61,486	2,116	60,428	783,873	12.7
72–73	0.037097	59,370	2,202	58,269	723,445	12.2
73–74	0.039968	57,168	2,285	56,025	665,176	11.6
74–75	0.043072	54,883	2,364	53,701	609,150	11.1
75–76	0.046420	52,519	2,438	51,300	555,449	10.6
76–77	0.049814	50,081	2,495	48,834	504,149	10.1
77–78	0.053481	47,586	2,545	46,314	455,316	9.6
78–79	0.058054	45,041	2,615	43,734	409,002	9.1
79–80	0.062943	42,427	2,670	41,091	365,268	8.6
80–81	0.068451	39,756	2,721	38,395	324,176	8.2
81–82	0.074066	37,035	2,743	35,663	285,781	7.7
82–83	0.079750	34,292	2,735	32,924	250,118	7.3
83–84	0.085560	31,557	2,700	30,207	217,193	6.9
84–85	0.093624	28,857	2,702	27,506	186,986	6.5
85–86	0.101609	26,155	2,658	24,826	159,480	6.1
86–87	0.110981	23,498	2,608	22,194	134,654	5.7
87–88	0.121033	20,890	2,528	19,626	112,460	5.4
88–89	0.131780	18,362	2,420	17,152	92,834	5.1
89–90	0.143230	15,942	2,283	14,800	75,683	4.7
90–91	0.155386	13,658	2,122	12,597	60,882	4.5
91–92	0.168242	11,536	1,941	10,566	48,285	4.2
92–93	0.181784	9,595	1,744	8,723	37,719	3.9
93–94	0.195987	7,851	1,539	7,082	28,996	3.7
94–95	0.210817	6,312	1,331	5,647	21,915	3.5
95–96	0.226231	4,982	1,127	4,418	16,268	3.3
96–97	0.242172	3,855	933	3,388	11,850	3.1
97–98	0.258577	2,921	755	2,543	8,462	2.9
98–99	0.275373	2,166	596	1,868	5,918	2.7
99–100	0.292477	1,569	459	1,340	4,051	2.6
100 and over	1.000000	1,110	1,110	2,711	2,711	2.4

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 9. Life table for black females: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table09.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.010339	100,000	1,034	99,099	7,845,468	78.5
1-2	0.000528	98,966	52	98,940	7,746,368	78.3
2-3	0.000322	98,914	32	98,898	7,647,428	77.3
3-4	0.000243	98,882	24	98,870	7,548,530	76.3
4-5	0.000185	98,858	18	98,849	7,449,660	75.4
5-6	0.000181	98,840	18	98,831	7,350,812	74.4
6-7	0.000158	98,822	16	98,814	7,251,981	73.4
7-8	0.000141	98,806	14	98,799	7,153,167	72.4
8-9	0.000129	98,792	13	98,786	7,054,368	71.4
9-10	0.000124	98,780	12	98,773	6,955,582	70.4
10-11	0.000124	98,767	12	98,761	6,856,808	69.4
11-12	0.000132	98,755	13	98,749	6,758,047	68.4
12-13	0.000147	98,742	15	98,735	6,659,298	67.4
13-14	0.000170	98,727	17	98,719	6,560,564	66.5
14-15	0.000200	98,711	20	98,701	6,461,845	65.5
15-16	0.000232	98,691	23	98,680	6,363,144	64.5
16-17	0.000268	98,668	26	98,655	6,264,464	63.5
17-18	0.000314	98,642	31	98,626	6,165,809	62.5
18-19	0.000368	98,611	36	98,593	6,067,183	61.5
19-20	0.000427	98,574	42	98,553	5,968,590	60.5
20-21	0.000487	98,532	48	98,508	5,870,037	59.6
21-22	0.000544	98,484	54	98,458	5,771,529	58.6
22-23	0.000589	98,431	58	98,402	5,673,071	57.6
23-24	0.000623	98,373	61	98,342	5,574,669	56.7
24-25	0.000651	98,311	64	98,279	5,476,327	55.7
25-26	0.000679	98,247	67	98,214	5,378,048	54.7
26-27	0.000713	98,181	70	98,146	5,279,834	53.8
27-28	0.000756	98,111	74	98,074	5,181,688	52.8
28-29	0.000812	98,036	80	97,997	5,083,615	51.9
29-30	0.000878	97,957	86	97,914	4,985,618	50.9
30-31	0.000954	97,871	93	97,824	4,887,704	49.9
31-32	0.001034	97,778	101	97,727	4,789,880	49.0
32-33	0.001113	97,676	109	97,622	4,692,153	48.0
33-34	0.001187	97,568	116	97,510	4,594,531	47.1
34-35	0.001259	97,452	123	97,391	4,497,021	46.1
35-36	0.001337	97,329	130	97,264	4,399,631	45.2
36-37	0.001428	97,199	139	97,130	4,302,366	44.3
37-38	0.001532	97,060	149	96,986	4,205,237	43.3
38-39	0.001651	96,912	160	96,832	4,108,251	42.4
39-40	0.001788	96,752	173	96,665	4,011,419	41.5
40-41	0.001943	96,579	188	96,485	3,914,754	40.5
41-42	0.002114	96,391	204	96,289	3,818,269	39.6
42-43	0.002293	96,187	221	96,077	3,721,980	38.7
43-44	0.002476	95,967	238	95,848	3,625,903	37.8
44-45	0.002671	95,729	256	95,601	3,530,056	36.9
45-46	0.002880	95,473	275	95,336	3,434,455	36.0
46-47	0.003121	95,198	297	95,050	3,339,119	35.1
47-48	0.003410	94,901	324	94,739	3,244,069	34.2
48-49	0.003753	94,578	355	94,400	3,149,330	33.3
49-50	0.004136	94,223	390	94,028	3,054,930	32.4
50-51	0.004520	93,833	424	93,621	2,960,902	31.6
51-52	0.004911	93,409	459	93,179	2,867,281	30.7
52-53	0.005352	92,950	497	92,701	2,774,102	29.8
53-54	0.005860	92,452	542	92,182	2,681,401	29.0
54-55	0.006423	91,911	590	91,616	2,589,219	28.2
55-56	0.007021	91,320	641	91,000	2,497,604	27.3
56-57	0.007620	90,679	691	90,334	2,406,604	26.5
57-58	0.008217	89,988	739	89,619	2,316,270	25.7
58-59	0.008810	89,249	786	88,856	2,226,652	24.9
59-60	0.009413	88,463	833	88,046	2,137,796	24.2
60-61	0.010072	87,630	883	87,189	2,049,750	23.4

Table 9. Life table for black females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table09.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.010786	86,747	936	86,279	1,962,561	22.6
62–63	0.011505	85,812	987	85,318	1,876,282	21.9
63–64	0.012202	84,824	1,035	84,307	1,790,964	21.1
64–65	0.012892	83,789	1,080	83,249	1,706,657	20.4
65–66	0.013615	82,709	1,126	82,146	1,623,408	19.6
66–67	0.014430	81,583	1,177	80,994	1,541,262	18.9
67–68	0.015381	80,406	1,237	79,787	1,460,268	18.2
68–69	0.016575	79,169	1,312	78,513	1,380,480	17.4
69–70	0.017996	77,857	1,401	77,156	1,301,967	16.7
70–71	0.019679	76,456	1,505	75,703	1,224,811	16.0
71–72	0.021507	74,951	1,612	74,145	1,149,108	15.3
72–73	0.023437	73,339	1,719	72,480	1,074,963	14.7
73–74	0.025497	71,620	1,826	70,707	1,002,483	14.0
74–75	0.027753	69,794	1,937	68,826	931,776	13.4
75–76	0.030003	67,857	2,036	66,839	862,950	12.7
76–77	0.032510	65,821	2,140	64,751	796,111	12.1
77–78	0.035527	63,681	2,262	62,550	731,360	11.5
78–79	0.038905	61,419	2,390	60,224	668,810	10.9
79–80	0.042624	59,029	2,516	57,771	608,585	10.3
80–81	0.046742	56,513	2,642	55,193	550,814	9.7
81–82	0.051714	53,872	2,786	52,479	495,621	9.2
82–83	0.057091	51,086	2,917	49,628	443,142	8.7
83–84	0.062763	48,169	3,023	46,658	393,515	8.2
84–85	0.069363	45,146	3,131	43,580	346,857	7.7
85–86	0.076850	42,015	3,229	40,400	303,277	7.2
86–87	0.084751	38,786	3,287	37,142	262,876	6.8
87–88	0.093335	35,499	3,313	33,842	225,734	6.4
88–89	0.102635	32,185	3,303	30,534	191,892	6.0
89–90	0.112679	28,882	3,254	27,255	161,358	5.6
90–91	0.123492	25,628	3,165	24,045	134,103	5.2
91–92	0.135089	22,463	3,034	20,946	110,058	4.9
92–93	0.147479	19,428	2,865	17,996	89,113	4.6
93–94	0.160663	16,563	2,661	15,233	71,117	4.3
94–95	0.174628	13,902	2,428	12,688	55,884	4.0
95–96	0.189353	11,474	2,173	10,388	43,196	3.8
96–97	0.204803	9,302	1,905	8,349	32,808	3.5
97–98	0.220930	7,397	1,634	6,580	24,459	3.3
98–99	0.237674	5,762	1,370	5,078	17,879	3.1
99–100	0.254960	4,393	1,120	3,833	12,802	2.9
100 and over	1.000000	3,273	3,273	8,969	8,969	2.7

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 10. Life table for Hispanic population: United States, 2015Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table10.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004966	100,000	497	99,559	8,193,206	81.9
1-2	0.000340	99,503	34	99,487	8,093,647	81.3
2-3	0.000188	99,470	19	99,460	7,994,161	80.4
3-4	0.000146	99,451	15	99,444	7,894,701	79.4
4-5	0.000109	99,436	11	99,431	7,795,257	78.4
5-6	0.000111	99,426	11	99,420	7,695,826	77.4
6-7	0.000101	99,415	10	99,409	7,596,406	76.4
7-8	0.000093	99,404	9	99,400	7,496,997	75.4
8-9	0.000085	99,395	8	99,391	7,397,597	74.4
9-10	0.000078	99,387	8	99,383	7,298,206	73.4
10-11	0.000073	99,379	7	99,375	7,198,823	72.4
11-12	0.000078	99,372	8	99,368	7,099,448	71.4
12-13	0.000097	99,364	10	99,359	7,000,080	70.4
13-14	0.000136	99,354	14	99,348	6,900,721	69.5
14-15	0.000190	99,341	19	99,331	6,801,373	68.5
15-16	0.000249	99,322	25	99,310	6,702,042	67.5
16-17	0.000310	99,297	31	99,282	6,602,732	66.5
17-18	0.000378	99,266	38	99,248	6,503,450	65.5
18-19	0.000452	99,229	45	99,206	6,404,203	64.5
19-20	0.000526	99,184	52	99,158	6,304,996	63.6
20-21	0.000602	99,132	60	99,102	6,205,838	62.6
21-22	0.000672	99,072	67	99,039	6,106,736	61.6
22-23	0.000722	99,006	72	98,970	6,007,697	60.7
23-24	0.000748	98,934	74	98,897	5,908,727	59.7
24-25	0.000756	98,860	75	98,823	5,809,830	58.8
25-26	0.000756	98,785	75	98,748	5,711,007	57.8
26-27	0.000760	98,711	75	98,673	5,612,259	56.9
27-28	0.000768	98,636	76	98,598	5,513,586	55.9
28-29	0.000785	98,560	77	98,521	5,414,988	54.9
29-30	0.000809	98,483	80	98,443	5,316,467	54.0
30-31	0.000835	98,403	82	98,362	5,218,024	53.0
31-32	0.000859	98,321	84	98,278	5,119,662	52.1
32-33	0.000881	98,236	87	98,193	5,021,384	51.1
33-34	0.000903	98,150	89	98,105	4,923,191	50.2
34-35	0.000925	98,061	91	98,016	4,825,086	49.2
35-36	0.000950	97,970	93	97,924	4,727,070	48.2
36-37	0.000983	97,877	96	97,829	4,629,146	47.3
37-38	0.001024	97,781	100	97,731	4,531,317	46.3
38-39	0.001075	97,681	105	97,628	4,433,586	45.4
39-40	0.001137	97,576	111	97,520	4,335,957	44.4
40-41	0.001209	97,465	118	97,406	4,238,437	43.5
41-42	0.001291	97,347	126	97,284	4,141,031	42.5
42-43	0.001388	97,221	135	97,154	4,043,746	41.6
43-44	0.001504	97,087	146	97,013	3,946,592	40.7
44-45	0.001639	96,940	159	96,861	3,849,579	39.7
45-46	0.001787	96,782	173	96,695	3,752,718	38.8
46-47	0.001951	96,609	188	96,514	3,656,023	37.8
47-48	0.002144	96,420	207	96,317	3,559,508	36.9
48-49	0.002372	96,213	228	96,099	3,463,191	36.0
49-50	0.002627	95,985	252	95,859	3,367,092	35.1
50-51	0.002906	95,733	278	95,594	3,271,233	34.2
51-52	0.003199	95,455	305	95,302	3,175,639	33.3
52-53	0.003497	95,150	333	94,983	3,080,337	32.4
53-54	0.003798	94,817	360	94,637	2,985,353	31.5
54-55	0.004108	94,457	388	94,263	2,890,717	30.6
55-56	0.004438	94,069	417	93,860	2,796,454	29.7
56-57	0.004800	93,651	450	93,426	2,702,594	28.9
57-58	0.005206	93,202	485	92,959	2,609,168	28.0
58-59	0.005669	92,716	526	92,454	2,516,208	27.1
59-60	0.006188	92,191	570	91,906	2,423,755	26.3
60-61	0.006771	91,620	620	91,310	2,331,849	25.5

See footnote at end of table.

Table 10. Life table for Hispanic population: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table10.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.007400	91,000	673	90,663	2,240,539	24.6
62–63	0.008034	90,327	726	89,964	2,149,875	23.8
63–64	0.008636	89,601	774	89,214	2,059,912	23.0
64–65	0.009215	88,827	819	88,418	1,970,697	22.2
65–66	0.009814	88,009	864	87,577	1,882,279	21.4
66–67	0.010484	87,145	914	86,688	1,794,703	20.6
67–68	0.011237	86,231	969	85,747	1,708,014	19.8
68–69	0.012123	85,262	1,034	84,746	1,622,268	19.0
69–70	0.013168	84,229	1,109	83,674	1,537,522	18.3
70–71	0.014381	83,120	1,195	82,522	1,453,848	17.5
71–72	0.015752	81,924	1,290	81,279	1,371,326	16.7
72–73	0.017273	80,634	1,393	79,937	1,290,047	16.0
73–74	0.018887	79,241	1,497	78,493	1,210,109	15.3
74–75	0.020583	77,744	1,600	76,944	1,131,617	14.6
75–76	0.022349	76,144	1,702	75,293	1,054,672	13.9
76–77	0.024387	74,442	1,815	73,535	979,379	13.2
77–78	0.026879	72,627	1,952	71,651	905,845	12.5
78–79	0.029941	70,675	2,116	69,617	834,194	11.8
79–80	0.033509	68,559	2,297	67,410	764,577	11.2
80–81	0.037416	66,261	2,479	65,022	697,167	10.5
81–82	0.041691	63,782	2,659	62,453	632,145	9.9
82–83	0.046471	61,123	2,840	59,703	569,693	9.3
83–84	0.051732	58,283	3,015	56,775	509,990	8.8
84–85	0.057797	55,267	3,194	53,670	453,215	8.2
85–86	0.063856	52,073	3,325	50,411	399,544	7.7
86–87	0.071852	48,748	3,503	46,997	349,134	7.2
87–88	0.080699	45,245	3,651	43,420	302,137	6.7
88–89	0.090449	41,594	3,762	39,713	258,717	6.2
89–90	0.101148	37,832	3,827	35,919	219,004	5.8
90–91	0.112833	34,005	3,837	32,087	183,086	5.4
91–92	0.125529	30,168	3,787	28,275	150,999	5.0
92–93	0.139246	26,381	3,674	24,545	122,724	4.7
93–94	0.153977	22,708	3,497	20,960	98,179	4.3
94–95	0.169695	19,211	3,260	17,581	77,219	4.0
95–96	0.186350	15,951	2,973	14,465	59,638	3.7
96–97	0.203867	12,979	2,646	11,656	45,173	3.5
97–98	0.222151	10,333	2,295	9,185	33,517	3.2
98–99	0.241082	8,037	1,938	7,069	24,332	3.0
99–100	0.260520	6,100	1,589	5,305	17,263	2.8
100 and over	1.000000	4,511	4,511	11,958	11,958	2.7

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 11. Life table for Hispanic males: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table11.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.005348	100,000	535	99,526	7,929,637	79.3
1-2	0.000378	99,465	38	99,446	7,830,111	78.7
2-3	0.000203	99,428	20	99,417	7,730,664	77.8
3-4	0.000156	99,407	15	99,400	7,631,247	76.8
4-5	0.000110	99,392	11	99,386	7,531,847	75.8
5-6	0.000127	99,381	13	99,375	7,432,461	74.8
6-7	0.000120	99,368	12	99,362	7,333,086	73.8
7-8	0.000111	99,356	11	99,351	7,233,724	72.8
8-9	0.000100	99,345	10	99,340	7,134,373	71.8
9-10	0.000086	99,335	9	99,331	7,035,033	70.8
10-11	0.000076	99,327	8	99,323	6,935,702	69.8
11-12	0.000077	99,319	8	99,316	6,836,378	68.8
12-13	0.000102	99,312	10	99,307	6,737,063	67.8
13-14	0.000156	99,302	15	99,294	6,637,756	66.8
14-15	0.000234	99,286	23	99,274	6,538,462	65.9
15-16	0.000319	99,263	32	99,247	6,439,188	64.9
16-17	0.000406	99,231	40	99,211	6,339,941	63.9
17-18	0.000507	99,191	50	99,166	6,240,730	62.9
18-19	0.000620	99,141	61	99,110	6,141,564	61.9
19-20	0.000735	99,079	73	99,043	6,042,455	61.0
20-21	0.000853	99,006	84	98,964	5,943,412	60.0
21-22	0.000960	98,922	95	98,874	5,844,448	59.1
22-23	0.001038	98,827	103	98,776	5,745,573	58.1
23-24	0.001082	98,724	107	98,671	5,646,798	57.2
24-25	0.001100	98,617	108	98,563	5,548,127	56.3
25-26	0.001109	98,509	109	98,454	5,449,564	55.3
26-27	0.001120	98,400	110	98,345	5,351,109	54.4
27-28	0.001130	98,290	111	98,234	5,252,765	53.4
28-29	0.001140	98,179	112	98,123	5,154,530	52.5
29-30	0.001151	98,067	113	98,010	5,056,408	51.6
30-31	0.001161	97,954	114	97,897	4,958,398	50.6
31-32	0.001171	97,840	115	97,783	4,860,501	49.7
32-33	0.001187	97,725	116	97,667	4,762,718	48.7
33-34	0.001214	97,609	118	97,550	4,665,051	47.8
34-35	0.001250	97,491	122	97,430	4,567,500	46.9
35-36	0.001292	97,369	126	97,306	4,470,070	45.9
36-37	0.001340	97,243	130	97,178	4,372,764	45.0
37-38	0.001398	97,113	136	97,045	4,275,586	44.0
38-39	0.001465	96,977	142	96,906	4,178,541	43.1
39-40	0.001544	96,835	149	96,760	4,081,635	42.2
40-41	0.001636	96,686	158	96,607	3,984,874	41.2
41-42	0.001742	96,527	168	96,443	3,888,268	40.3
42-43	0.001859	96,359	179	96,270	3,791,824	39.4
43-44	0.001987	96,180	191	96,085	3,695,555	38.4
44-45	0.002129	95,989	204	95,887	3,599,470	37.5
45-46	0.002281	95,785	218	95,675	3,503,583	36.6
46-47	0.002456	95,566	235	95,449	3,407,908	35.7
47-48	0.002679	95,331	255	95,204	3,312,459	34.7
48-49	0.002964	95,076	282	94,935	3,217,256	33.8
49-50	0.003303	94,794	313	94,638	3,122,321	32.9
50-51	0.003676	94,481	347	94,307	3,027,683	32.0
51-52	0.004066	94,134	383	93,942	2,933,376	31.2
52-53	0.004471	93,751	419	93,541	2,839,433	30.3
53-54	0.004887	93,332	456	93,104	2,745,892	29.4
54-55	0.005321	92,876	494	92,629	2,652,788	28.6
55-56	0.005790	92,382	535	92,114	2,560,159	27.7
56-57	0.006302	91,847	579	91,557	2,468,045	26.9
57-58	0.006850	91,268	625	90,955	2,376,488	26.0
58-59	0.007436	90,643	674	90,306	2,285,533	25.2
59-60	0.008066	89,969	726	89,606	2,195,227	24.4
60-61	0.008762	89,243	782	88,852	2,105,621	23.6

See footnote at end of table.

Table 11. Life table for Hispanic males: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table11.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.009523	88,461	842	88,040	2,016,769	22.8
62–63	0.010314	87,619	904	87,167	1,928,730	22.0
63–64	0.011106	86,715	963	86,233	1,841,563	21.2
64–65	0.011900	85,752	1,020	85,242	1,755,330	20.5
65–66	0.012728	84,731	1,078	84,192	1,670,088	19.7
66–67	0.013630	83,653	1,140	83,083	1,585,896	19.0
67–68	0.014615	82,513	1,206	81,910	1,502,813	18.2
68–69	0.015733	81,307	1,279	80,667	1,420,903	17.5
69–70	0.017020	80,028	1,362	79,346	1,340,236	16.7
70–71	0.018506	78,665	1,456	77,938	1,260,890	16.0
71–72	0.020181	77,210	1,558	76,431	1,182,952	15.3
72–73	0.022003	75,652	1,665	74,819	1,106,522	14.6
73–74	0.023880	73,987	1,767	73,104	1,031,702	13.9
74–75	0.025789	72,220	1,863	71,289	958,599	13.3
75–76	0.027713	70,358	1,950	69,383	887,310	12.6
76–77	0.029965	68,408	2,050	67,383	817,927	12.0
77–78	0.032838	66,358	2,179	65,268	750,544	11.3
78–79	0.036472	64,179	2,341	63,009	685,276	10.7
79–80	0.040797	61,838	2,523	60,577	622,267	10.1
80–81	0.045589	59,315	2,704	57,963	561,690	9.5
81–82	0.050970	56,611	2,885	55,169	503,727	8.9
82–83	0.056594	53,726	3,041	52,206	448,558	8.3
83–84	0.062707	50,685	3,178	49,096	396,353	7.8
84–85	0.069911	47,507	3,321	45,846	347,257	7.3
85–86	0.076634	44,186	3,386	42,493	301,410	6.8
86–87	0.086271	40,800	3,520	39,040	258,918	6.3
87–88	0.096899	37,280	3,612	35,474	219,878	5.9
88–89	0.108565	33,667	3,655	31,840	184,405	5.5
89–90	0.121303	30,012	3,641	28,192	152,565	5.1
90–91	0.135130	26,372	3,564	24,590	124,373	4.7
91–92	0.150049	22,808	3,422	21,097	99,783	4.4
92–93	0.166037	19,386	3,219	17,776	78,686	4.1
93–94	0.183049	16,167	2,959	14,687	60,910	3.8
94–95	0.201012	13,208	2,655	11,880	46,222	3.5
95–96	0.219827	10,553	2,320	9,393	34,342	3.3
96–97	0.239369	8,233	1,971	7,248	24,949	3.0
97–98	0.259489	6,262	1,625	5,450	17,702	2.8
98–99	0.280017	4,637	1,299	3,988	12,252	2.6
99–100	0.300770	3,339	1,004	2,837	8,264	2.5
100 and over	1.000000	2,335	2,335	5,427	5,427	2.3

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 12. Life table for Hispanic females: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table12.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004568	100,000	457	99,593	8,430,561	84.3
1-2	0.000293	99,543	29	99,529	8,330,968	83.7
2-3	0.000168	99,514	17	99,506	8,231,439	82.7
3-4	0.000133	99,497	13	99,491	8,131,933	81.7
4-5	0.000107	99,484	11	99,479	8,032,443	80.7
5-6	0.000091	99,474	9	99,469	7,932,964	79.7
6-7	0.000080	99,464	8	99,460	7,833,495	78.8
7-8	0.000072	99,457	7	99,453	7,734,034	77.8
8-9	0.000068	99,449	7	99,446	7,634,581	76.8
9-10	0.000066	99,443	7	99,439	7,535,135	75.8
10-11	0.000068	99,436	7	99,433	7,435,696	74.8
11-12	0.000075	99,429	7	99,425	7,336,264	73.8
12-13	0.000090	99,422	9	99,417	7,236,838	72.8
13-14	0.000113	99,413	11	99,407	7,137,421	71.8
14-15	0.000144	99,402	14	99,394	7,038,014	70.8
15-16	0.000178	99,387	18	99,378	6,938,619	69.8
16-17	0.000213	99,370	21	99,359	6,839,241	68.8
17-18	0.000246	99,348	24	99,336	6,739,882	67.8
18-19	0.000276	99,324	27	99,310	6,640,545	66.9
19-20	0.000302	99,297	30	99,282	6,541,235	65.9
20-21	0.000329	99,267	33	99,250	6,441,953	64.9
21-22	0.000354	99,234	35	99,216	6,342,703	63.9
22-23	0.000371	99,199	37	99,180	6,243,487	62.9
23-24	0.000376	99,162	37	99,143	6,144,306	62.0
24-25	0.000373	99,125	37	99,106	6,045,163	61.0
25-26	0.000365	99,088	36	99,070	5,946,057	60.0
26-27	0.000360	99,052	36	99,034	5,846,987	59.0
27-28	0.000368	99,016	36	98,998	5,747,953	58.1
28-29	0.000393	98,980	39	98,960	5,648,955	57.1
29-30	0.000431	98,941	43	98,919	5,549,995	56.1
30-31	0.000474	98,898	47	98,875	5,451,076	55.1
31-32	0.000514	98,851	51	98,826	5,352,202	54.1
32-33	0.000545	98,800	54	98,773	5,253,376	53.2
33-34	0.000564	98,746	56	98,719	5,154,602	52.2
34-35	0.000574	98,691	57	98,662	5,055,884	51.2
35-36	0.000586	98,634	58	98,605	4,957,221	50.3
36-37	0.000605	98,576	60	98,547	4,858,616	49.3
37-38	0.000633	98,517	62	98,486	4,760,070	48.3
38-39	0.000670	98,454	66	98,421	4,661,584	47.3
39-40	0.000719	98,388	71	98,353	4,563,163	46.4
40-41	0.000772	98,318	76	98,280	4,464,810	45.4
41-42	0.000833	98,242	82	98,201	4,366,530	44.4
42-43	0.000911	98,160	89	98,115	4,268,329	43.5
43-44	0.001013	98,070	99	98,021	4,170,214	42.5
44-45	0.001137	97,971	111	97,915	4,072,193	41.6
45-46	0.001275	97,860	125	97,797	3,974,278	40.6
46-47	0.001423	97,735	139	97,665	3,876,480	39.7
47-48	0.001584	97,596	155	97,519	3,778,815	38.7
48-49	0.001752	97,441	171	97,356	3,681,296	37.8
49-50	0.001926	97,271	187	97,177	3,583,940	36.8
50-51	0.002115	97,083	205	96,981	3,486,763	35.9
51-52	0.002314	96,878	224	96,766	3,389,783	35.0
52-53	0.002513	96,654	243	96,532	3,293,017	34.1
53-54	0.002706	96,411	261	96,280	3,196,485	33.2
54-55	0.002904	96,150	279	96,010	3,100,204	32.2
55-56	0.003107	95,871	298	95,722	3,004,194	31.3
56-57	0.003336	95,573	319	95,413	2,908,472	30.4
57-58	0.003620	95,254	345	95,082	2,813,059	29.5
58-59	0.003982	94,909	378	94,720	2,717,977	28.6
59-60	0.004414	94,531	417	94,323	2,623,257	27.8
60-61	0.004914	94,114	462	93,883	2,528,934	26.9

See footnote at end of table.

Table 12. Life table for Hispanic females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table12.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.005444	93,651	510	93,397	2,435,052	26.0
62–63	0.005962	93,142	555	92,864	2,341,655	25.1
63–64	0.006424	92,586	595	92,289	2,248,791	24.3
64–65	0.006846	91,992	630	91,677	2,156,502	23.4
65–66	0.007282	91,362	665	91,029	2,064,825	22.6
66–67	0.007789	90,697	706	90,343	1,973,796	21.8
67–68	0.008382	89,990	754	89,613	1,883,453	20.9
68–69	0.009110	89,236	813	88,829	1,793,840	20.1
69–70	0.009995	88,423	884	87,981	1,705,011	19.3
70–71	0.011028	87,539	965	87,056	1,617,030	18.5
71–72	0.012204	86,574	1,057	86,045	1,529,973	17.7
72–73	0.013539	85,517	1,158	84,938	1,443,928	16.9
73–74	0.015003	84,359	1,266	83,726	1,358,990	16.1
74–75	0.016586	83,094	1,378	82,405	1,275,263	15.3
75–76	0.018282	81,715	1,494	80,969	1,192,859	14.6
76–77	0.020201	80,222	1,621	79,411	1,111,890	13.9
77–78	0.022476	78,601	1,767	77,718	1,032,479	13.1
78–79	0.025226	76,834	1,938	75,865	954,761	12.4
79–80	0.028402	74,896	2,127	73,833	878,896	11.7
80–81	0.031884	72,769	2,320	71,609	805,063	11.1
81–82	0.035644	70,449	2,511	69,193	733,454	10.4
82–83	0.040148	67,938	2,728	66,574	664,261	9.8
83–84	0.045200	65,210	2,947	63,736	597,687	9.2
84–85	0.050940	62,263	3,172	60,677	533,951	8.6
85–86	0.056766	59,091	3,354	57,414	473,274	8.0
86–87	0.064465	55,737	3,593	53,940	415,860	7.5
87–88	0.073070	52,144	3,810	50,239	361,920	6.9
88–89	0.082648	48,334	3,995	46,336	311,681	6.4
89–90	0.093264	44,339	4,135	42,271	265,345	6.0
90–91	0.104971	40,204	4,220	38,094	223,074	5.5
91–92	0.117813	35,983	4,239	33,864	184,980	5.1
92–93	0.131816	31,744	4,184	29,652	151,116	4.8
93–94	0.146989	27,560	4,051	25,534	121,465	4.4
94–95	0.163315	23,509	3,839	21,589	95,930	4.1
95–96	0.180751	19,669	3,555	17,892	74,341	3.8
96–97	0.199225	16,114	3,210	14,509	56,449	3.5
97–98	0.218636	12,904	2,821	11,493	41,940	3.3
98–99	0.238852	10,083	2,408	8,878	30,447	3.0
99–100	0.259714	7,674	1,993	6,678	21,569	2.8
100 and over	1.000000	5,681	5,681	14,891	14,891	2.6

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 13. Life table for non-Hispanic white population: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table13.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004897	100,000	490	99,571	7,867,086	78.7
1-2	0.000352	99,510	35	99,493	7,767,516	78.1
2-3	0.000232	99,475	23	99,464	7,668,023	77.1
3-4	0.000182	99,452	18	99,443	7,568,559	76.1
4-5	0.000139	99,434	14	99,427	7,469,116	75.1
5-6	0.000134	99,420	13	99,414	7,369,689	74.1
6-7	0.000119	99,407	12	99,401	7,270,275	73.1
7-8	0.000108	99,395	11	99,390	7,170,874	72.1
8-9	0.000098	99,384	10	99,379	7,071,485	71.2
9-10	0.000091	99,375	9	99,370	6,972,105	70.2
10-11	0.000090	99,366	9	99,361	6,872,735	69.2
11-12	0.000099	99,357	10	99,352	6,773,374	68.2
12-13	0.000126	99,347	12	99,341	6,674,022	67.2
13-14	0.000172	99,334	17	99,326	6,574,682	66.2
14-15	0.000235	99,317	23	99,306	6,475,356	65.2
15-16	0.000302	99,294	30	99,279	6,376,050	64.2
16-17	0.000372	99,264	37	99,245	6,276,771	63.2
17-18	0.000452	99,227	45	99,205	6,177,526	62.3
18-19	0.000539	99,182	53	99,155	6,078,321	61.3
19-20	0.000629	99,129	62	99,098	5,979,166	60.3
20-21	0.000722	99,066	72	99,031	5,880,068	59.4
21-22	0.000809	98,995	80	98,955	5,781,038	58.4
22-23	0.000883	98,915	87	98,871	5,682,083	57.4
23-24	0.000940	98,827	93	98,781	5,583,212	56.5
24-25	0.000985	98,734	97	98,686	5,484,431	55.5
25-26	0.001026	98,637	101	98,587	5,385,745	54.6
26-27	0.001070	98,536	105	98,483	5,287,159	53.7
27-28	0.001115	98,431	110	98,376	5,188,675	52.7
28-29	0.001164	98,321	114	98,264	5,090,300	51.8
29-30	0.001215	98,206	119	98,147	4,992,036	50.8
30-31	0.001270	98,087	125	98,025	4,893,889	49.9
31-32	0.001325	97,963	130	97,898	4,795,864	49.0
32-33	0.001375	97,833	135	97,765	4,697,967	48.0
33-34	0.001418	97,698	139	97,629	4,600,201	47.1
34-35	0.001460	97,560	142	97,488	4,502,573	46.2
35-36	0.001509	97,417	147	97,344	4,405,084	45.2
36-37	0.001570	97,270	153	97,194	4,307,740	44.3
37-38	0.001639	97,117	159	97,038	4,210,547	43.4
38-39	0.001714	96,958	166	96,875	4,113,509	42.4
39-40	0.001799	96,792	174	96,705	4,016,634	41.5
40-41	0.001905	96,618	184	96,526	3,919,929	40.6
41-42	0.002031	96,434	196	96,336	3,823,403	39.6
42-43	0.002168	96,238	209	96,134	3,727,067	38.7
43-44	0.002312	96,029	222	95,918	3,630,933	37.8
44-45	0.002472	95,807	237	95,689	3,535,014	36.9
45-46	0.002641	95,571	252	95,444	3,439,325	36.0
46-47	0.002843	95,318	271	95,183	3,343,881	35.1
47-48	0.003107	95,047	295	94,899	3,248,698	34.2
48-49	0.003441	94,752	326	94,589	3,153,799	33.3
49-50	0.003819	94,426	361	94,245	3,059,210	32.4
50-51	0.004202	94,065	395	93,868	2,964,965	31.5
51-52	0.004579	93,670	429	93,455	2,871,097	30.7
52-53	0.004975	93,241	464	93,009	2,777,642	29.8
53-54	0.005397	92,777	501	92,527	2,684,633	28.9
54-55	0.005845	92,277	539	92,007	2,592,106	28.1
55-56	0.006320	91,737	580	91,447	2,500,099	27.3
56-57	0.006807	91,157	620	90,847	2,408,652	26.4
57-58	0.007298	90,537	661	90,206	2,317,805	25.6
58-59	0.007796	89,876	701	89,526	2,227,598	24.8
59-60	0.008315	89,175	742	88,805	2,138,072	24.0
60-61	0.008876	88,434	785	88,041	2,049,268	23.2

See footnote at end of table.

Table 13. Life table for non-Hispanic white population: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table13.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.009495	87,649	832	87,233	1,961,226	22.4
62–63	0.010171	86,817	883	86,375	1,873,993	21.6
63–64	0.010902	85,934	937	85,465	1,787,618	20.8
64–65	0.011682	84,997	993	84,500	1,702,153	20.0
65–66	0.012507	84,004	1,051	83,479	1,617,652	19.3
66–67	0.013409	82,953	1,112	82,397	1,534,174	18.5
67–68	0.014431	81,841	1,181	81,251	1,451,777	17.7
68–69	0.015616	80,660	1,260	80,030	1,370,526	17.0
69–70	0.017035	79,400	1,353	78,724	1,290,496	16.3
70–71	0.018771	78,048	1,465	77,315	1,211,772	15.5
71–72	0.020729	76,583	1,588	75,789	1,134,457	14.8
72–73	0.022786	74,995	1,709	74,141	1,058,668	14.1
73–74	0.024907	73,286	1,825	72,374	984,527	13.4
74–75	0.027229	71,461	1,946	70,488	912,153	12.8
75–76	0.029830	69,515	2,074	68,478	841,665	12.1
76–77	0.032814	67,442	2,213	66,335	773,186	11.5
77–78	0.036193	65,229	2,361	64,048	706,851	10.8
78–79	0.040115	62,868	2,522	61,607	642,803	10.2
79–80	0.044590	60,346	2,691	59,000	581,197	9.6
80–81	0.049530	57,655	2,856	56,227	522,196	9.1
81–82	0.054974	54,799	3,013	53,293	465,969	8.5
82–83	0.061153	51,787	3,167	50,203	412,676	8.0
83–84	0.067928	48,620	3,303	46,969	362,473	7.5
84–85	0.075707	45,317	3,431	43,602	315,504	7.0
85–86	0.083444	41,886	3,495	40,139	271,903	6.5
86–87	0.093604	38,391	3,594	36,594	231,764	6.0
87–88	0.104779	34,798	3,646	32,975	195,169	5.6
88–89	0.117015	31,152	3,645	29,329	162,195	5.2
89–90	0.130349	27,506	3,585	25,714	132,866	4.8
90–91	0.144802	23,921	3,464	22,189	107,152	4.5
91–92	0.160378	20,457	3,281	18,817	84,963	4.2
92–93	0.177061	17,176	3,041	15,656	66,146	3.9
93–94	0.194812	14,135	2,754	12,758	50,491	3.6
94–95	0.213566	11,381	2,431	10,166	37,733	3.3
95–96	0.233233	8,951	2,088	7,907	27,567	3.1
96–97	0.253697	6,863	1,741	5,993	19,660	2.9
97–98	0.274819	5,122	1,408	4,418	13,667	2.7
98–99	0.296436	3,714	1,101	3,164	9,249	2.5
99–100	0.318373	2,613	832	2,197	6,085	2.3
100 and over	1.000000	1,781	1,781	3,888	3,888	2.2

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 14. Life table for non-Hispanic white males: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.005335	100,000	533	99,534	7,632,180	76.3
1-2	0.000410	99,467	41	99,446	7,532,646	75.7
2-3	0.000272	99,426	27	99,412	7,433,200	74.8
3-4	0.000236	99,399	23	99,387	7,333,788	73.8
4-5	0.000177	99,375	18	99,366	7,234,401	72.8
5-6	0.000163	99,358	16	99,350	7,135,034	71.8
6-7	0.000143	99,341	14	99,334	7,035,685	70.8
7-8	0.000127	99,327	13	99,321	6,936,350	69.8
8-9	0.000114	99,315	11	99,309	6,837,029	68.8
9-10	0.000106	99,303	11	99,298	6,737,721	67.8
10-11	0.000106	99,293	11	99,287	6,638,423	66.9
11-12	0.000120	99,282	12	99,276	6,539,135	65.9
12-13	0.000156	99,270	15	99,263	6,439,859	64.9
13-14	0.000216	99,255	21	99,244	6,340,596	63.9
14-15	0.000298	99,233	30	99,219	6,241,352	62.9
15-16	0.000384	99,204	38	99,185	6,142,133	61.9
16-17	0.000475	99,166	47	99,142	6,042,949	60.9
17-18	0.000588	99,119	58	99,090	5,943,806	60.0
18-19	0.000722	99,060	72	99,025	5,844,717	59.0
19-20	0.000867	98,989	86	98,946	5,745,692	58.0
20-21	0.001016	98,903	101	98,853	5,646,746	57.1
21-22	0.001154	98,802	114	98,745	5,547,894	56.2
22-23	0.001265	98,688	125	98,626	5,449,148	55.2
23-24	0.001344	98,564	132	98,497	5,350,522	54.3
24-25	0.001399	98,431	138	98,362	5,252,025	53.4
25-26	0.001446	98,293	142	98,222	5,153,663	52.4
26-27	0.001497	98,151	147	98,078	5,055,440	51.5
27-28	0.001549	98,004	152	97,928	4,957,362	50.6
28-29	0.001604	97,853	157	97,774	4,859,434	49.7
29-30	0.001662	97,696	162	97,614	4,761,660	48.7
30-31	0.001723	97,533	168	97,449	4,664,045	47.8
31-32	0.001781	97,365	173	97,278	4,566,596	46.9
32-33	0.001832	97,192	178	97,103	4,469,318	46.0
33-34	0.001874	97,014	182	96,923	4,372,215	45.1
34-35	0.001912	96,832	185	96,739	4,275,292	44.2
35-36	0.001958	96,647	189	96,552	4,178,553	43.2
36-37	0.002018	96,458	195	96,360	4,082,001	42.3
37-38	0.002085	96,263	201	96,163	3,985,641	41.4
38-39	0.002158	96,062	207	95,959	3,889,478	40.5
39-40	0.002243	95,855	215	95,747	3,793,519	39.6
40-41	0.002354	95,640	225	95,527	3,697,772	38.7
41-42	0.002491	95,415	238	95,296	3,602,245	37.8
42-43	0.002641	95,177	251	95,051	3,506,949	36.8
43-44	0.002803	94,926	266	94,793	3,411,897	35.9
44-45	0.002985	94,660	283	94,518	3,317,105	35.0
45-46	0.003180	94,377	300	94,227	3,222,586	34.1
46-47	0.003419	94,077	322	93,916	3,128,359	33.3
47-48	0.003739	93,755	351	93,580	3,034,443	32.4
48-49	0.004154	93,405	388	93,211	2,940,863	31.5
49-50	0.004630	93,017	431	92,801	2,847,653	30.6
50-51	0.005115	92,586	474	92,349	2,754,851	29.8
51-52	0.005595	92,113	515	91,855	2,662,502	28.9
52-53	0.006100	91,597	559	91,318	2,570,647	28.1
53-54	0.006641	91,038	605	90,736	2,479,329	27.2
54-55	0.007216	90,434	653	90,108	2,388,593	26.4
55-56	0.007819	89,781	702	89,430	2,298,486	25.6
56-57	0.008436	89,079	751	88,703	2,209,056	24.8
57-58	0.009073	88,328	801	87,927	2,120,352	24.0
58-59	0.009736	87,526	852	87,100	2,032,425	23.2
59-60	0.010438	86,674	905	86,222	1,945,325	22.4
60-61	0.011202	85,769	961	85,289	1,859,103	21.7

See footnote at end of table.

Table 14. Life table for non-Hispanic white males: United States, 2015—Con.

Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.012025	84,809	1,020	84,299	1,773,814	20.9
62–63	0.012879	83,789	1,079	83,249	1,689,515	20.2
63–64	0.013735	82,710	1,136	82,142	1,606,266	19.4
64–65	0.014599	81,574	1,191	80,978	1,524,124	18.7
65–66	0.015489	80,383	1,245	79,760	1,443,146	18.0
66–67	0.016484	79,138	1,305	78,485	1,363,386	17.2
67–68	0.017620	77,833	1,371	77,147	1,284,900	16.5
68–69	0.018964	76,462	1,450	75,737	1,207,753	15.8
69–70	0.020597	75,012	1,545	74,239	1,132,016	15.1
70–71	0.022607	73,467	1,661	72,636	1,057,777	14.4
71–72	0.024856	71,806	1,785	70,913	985,140	13.7
72–73	0.027211	70,021	1,905	69,068	914,227	13.1
73–74	0.029701	68,116	2,023	67,104	845,158	12.4
74–75	0.032400	66,093	2,141	65,022	778,054	11.8
75–76	0.035388	63,951	2,263	62,820	713,032	11.1
76–77	0.038911	61,688	2,400	60,488	650,213	10.5
77–78	0.042758	59,288	2,535	58,020	589,725	9.9
78–79	0.047184	56,753	2,678	55,414	531,704	9.4
79–80	0.052329	54,075	2,830	52,660	476,291	8.8
80–81	0.058074	51,245	2,976	49,757	423,630	8.3
81–82	0.064606	48,269	3,118	46,710	373,873	7.7
82–83	0.071622	45,151	3,234	43,534	327,163	7.2
83–84	0.079223	41,917	3,321	40,257	283,629	6.8
84–85	0.088147	38,596	3,402	36,895	243,373	6.3
85–86	0.096442	35,194	3,394	33,497	206,478	5.9
86–87	0.108280	31,800	3,443	30,078	172,981	5.4
87–88	0.121261	28,357	3,439	26,637	142,902	5.0
88–89	0.135422	24,918	3,374	23,231	116,265	4.7
89–90	0.150779	21,544	3,248	19,919	93,034	4.3
90–91	0.167329	18,295	3,061	16,765	73,115	4.0
91–92	0.185044	15,234	2,819	13,824	56,350	3.7
92–93	0.203869	12,415	2,531	11,149	42,526	3.4
93–94	0.223719	9,884	2,211	8,778	31,376	3.2
94–95	0.244481	7,673	1,876	6,735	22,598	2.9
95–96	0.266013	5,797	1,542	5,026	15,863	2.7
96–97	0.288146	4,255	1,226	3,642	10,837	2.5
97–98	0.310694	3,029	941	2,558	7,195	2.4
98–99	0.333451	2,088	696	1,740	4,637	2.2
99–100	0.356207	1,392	496	1,144	2,897	2.1
100 and over	1.000000	896	896	1,754	1,754	2.0

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 15. Life table for non-Hispanic white females: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table15.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.004436	100,000	444	99,609	8,102,408	81.0
1-2	0.000287	99,556	29	99,542	8,002,798	80.4
2-3	0.000188	99,528	19	99,518	7,903,256	79.4
3-4	0.000127	99,509	13	99,503	7,803,738	78.4
4-5	0.000102	99,496	10	99,491	7,704,235	77.4
5-6	0.000102	99,486	10	99,481	7,604,744	76.4
6-7	0.000093	99,476	9	99,472	7,505,262	75.4
7-8	0.000087	99,467	9	99,463	7,405,791	74.5
8-9	0.000080	99,458	8	99,454	7,306,328	73.5
9-10	0.000075	99,450	7	99,447	7,206,874	72.5
10-11	0.000073	99,443	7	99,439	7,107,428	71.5
11-12	0.000078	99,436	8	99,432	7,007,988	70.5
12-13	0.000095	99,428	9	99,423	6,908,557	69.5
13-14	0.000126	99,418	13	99,412	6,809,133	68.5
14-15	0.000168	99,406	17	99,398	6,709,721	67.5
15-16	0.000216	99,389	21	99,378	6,610,324	66.5
16-17	0.000263	99,368	26	99,355	6,510,945	65.5
17-18	0.000307	99,342	31	99,326	6,411,591	64.5
18-19	0.000345	99,311	34	99,294	6,312,265	63.6
19-20	0.000378	99,277	38	99,258	6,212,971	62.6
20-21	0.000410	99,239	41	99,219	6,113,713	61.6
21-22	0.000445	99,198	44	99,176	6,014,494	60.6
22-23	0.000480	99,154	48	99,131	5,915,318	59.7
23-24	0.000515	99,107	51	99,081	5,816,187	58.7
24-25	0.000552	99,056	55	99,028	5,717,106	57.7
25-26	0.000589	99,001	58	98,972	5,618,077	56.7
26-27	0.000628	98,943	62	98,912	5,519,105	55.8
27-28	0.000668	98,881	66	98,848	5,420,194	54.8
28-29	0.000712	98,815	70	98,779	5,321,346	53.9
29-30	0.000758	98,744	75	98,707	5,222,567	52.9
30-31	0.000809	98,669	80	98,629	5,123,860	51.9
31-32	0.000861	98,590	85	98,547	5,025,231	51.0
32-33	0.000911	98,505	90	98,460	4,926,684	50.0
33-34	0.000956	98,415	94	98,368	4,828,224	49.1
34-35	0.001001	98,321	98	98,272	4,729,856	48.1
35-36	0.001053	98,222	103	98,171	4,631,584	47.2
36-37	0.001116	98,119	109	98,064	4,533,413	46.2
37-38	0.001186	98,010	116	97,952	4,435,349	45.3
38-39	0.001263	97,893	124	97,832	4,337,398	44.3
39-40	0.001349	97,770	132	97,704	4,239,566	43.4
40-41	0.001450	97,638	142	97,567	4,141,862	42.4
41-42	0.001566	97,496	153	97,420	4,044,295	41.5
42-43	0.001689	97,344	164	97,261	3,946,875	40.5
43-44	0.001817	97,179	177	97,091	3,849,614	39.6
44-45	0.001955	97,002	190	96,908	3,752,523	38.7
45-46	0.002099	96,813	203	96,711	3,655,615	37.8
46-47	0.002265	96,610	219	96,500	3,558,904	36.8
47-48	0.002474	96,391	238	96,272	3,462,404	35.9
48-49	0.002729	96,152	262	96,021	3,366,132	35.0
49-50	0.003013	95,890	289	95,745	3,270,111	34.1
50-51	0.003299	95,601	315	95,443	3,174,366	33.2
51-52	0.003579	95,286	341	95,115	3,078,922	32.3
52-53	0.003870	94,945	367	94,761	2,983,807	31.4
53-54	0.004179	94,577	395	94,380	2,889,046	30.5
54-55	0.004506	94,182	424	93,970	2,794,667	29.7
55-56	0.004860	93,758	456	93,530	2,700,697	28.8
56-57	0.005223	93,302	487	93,058	2,607,167	27.9
57-58	0.005580	92,815	518	92,556	2,514,109	27.1
58-59	0.005926	92,297	547	92,023	2,421,554	26.2
59-60	0.006280	91,750	576	91,462	2,329,530	25.4
60-61	0.006660	91,173	607	90,870	2,238,069	24.5

See footnote at end of table.

Table 15. Life table for non-Hispanic white females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table15.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.007098	90,566	643	90,245	2,147,199	23.7
62–63	0.007620	89,923	685	89,581	2,056,954	22.9
63–64	0.008242	89,238	735	88,870	1,967,373	22.0
64–65	0.008950	88,503	792	88,107	1,878,503	21.2
65–66	0.009719	87,711	852	87,284	1,790,396	20.4
66–67	0.010548	86,858	916	86,400	1,703,112	19.6
67–68	0.011480	85,942	987	85,449	1,616,711	18.8
68–69	0.012536	84,956	1,065	84,423	1,531,263	18.0
69–70	0.013780	83,891	1,156	83,312	1,446,840	17.2
70–71	0.015296	82,734	1,266	82,102	1,363,527	16.5
71–72	0.017032	81,469	1,388	80,775	1,281,425	15.7
72–73	0.018865	80,081	1,511	79,326	1,200,650	15.0
73–74	0.020705	78,571	1,627	77,757	1,121,324	14.3
74–75	0.022750	76,944	1,750	76,069	1,043,567	13.6
75–76	0.025079	75,193	1,886	74,250	967,499	12.9
76–77	0.027676	73,308	2,029	72,293	893,248	12.2
77–78	0.030744	71,279	2,191	70,183	820,955	11.5
78–79	0.034361	69,087	2,374	67,900	750,772	10.9
79–80	0.038427	66,713	2,564	65,432	682,872	10.2
80–81	0.042875	64,150	2,750	62,775	617,440	9.6
81–82	0.047645	61,399	2,925	59,937	554,666	9.0
82–83	0.053408	58,474	3,123	56,913	494,729	8.5
83–84	0.059833	55,351	3,312	53,695	437,816	7.9
84–85	0.067084	52,039	3,491	50,294	384,121	7.4
85–86	0.074394	48,548	3,612	46,742	333,827	6.9
86–87	0.083985	44,937	3,774	43,050	287,085	6.4
87–88	0.094614	41,163	3,895	39,215	244,035	5.9
88–89	0.106342	37,268	3,963	35,286	204,820	5.5
89–90	0.119222	33,305	3,971	31,320	169,534	5.1
90–91	0.133291	29,334	3,910	27,379	138,214	4.7
91–92	0.148569	25,424	3,777	23,536	110,835	4.4
92–93	0.165056	21,647	3,573	19,860	87,299	4.0
93–94	0.182728	18,074	3,303	16,423	67,439	3.7
94–95	0.201531	14,771	2,977	13,283	51,016	3.5
95–96	0.221385	11,794	2,611	10,489	37,733	3.2
96–97	0.242176	9,183	2,224	8,071	27,244	3.0
97–98	0.263762	6,959	1,836	6,042	19,173	2.8
98–99	0.285977	5,124	1,465	4,391	13,131	2.6
99–100	0.308630	3,658	1,129	3,094	8,740	2.4
100 and over	1.000000	2,529	2,529	5,646	5,646	2.2

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 16. Life table for non-Hispanic black population: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table16.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.011246	100,000	1,125	99,021	7,510,396	75.1
1-2	0.000710	98,875	70	98,840	7,411,375	75.0
2-3	0.000417	98,805	41	98,785	7,312,535	74.0
3-4	0.000334	98,764	33	98,748	7,213,750	73.0
4-5	0.000242	98,731	24	98,719	7,115,003	72.1
5-6	0.000233	98,707	23	98,696	7,016,284	71.1
6-7	0.000204	98,684	20	98,674	6,917,588	70.1
7-8	0.000179	98,664	18	98,655	6,818,914	69.1
8-9	0.000156	98,646	15	98,639	6,720,259	68.1
9-10	0.000137	98,631	14	98,624	6,621,620	67.1
10-11	0.000127	98,617	13	98,611	6,522,996	66.1
11-12	0.000136	98,605	13	98,598	6,424,385	65.2
12-13	0.000177	98,591	17	98,583	6,325,787	64.2
13-14	0.000256	98,574	25	98,561	6,227,204	63.2
14-15	0.000365	98,549	36	98,531	6,128,643	62.2
15-16	0.000477	98,513	47	98,489	6,030,113	61.2
16-17	0.000592	98,466	58	98,437	5,931,623	60.2
17-18	0.000726	98,407	71	98,372	5,833,187	59.3
18-19	0.000876	98,336	86	98,293	5,734,815	58.3
19-20	0.001026	98,250	101	98,199	5,636,522	57.4
20-21	0.001178	98,149	116	98,091	5,538,323	56.4
21-22	0.001311	98,033	128	97,969	5,440,232	55.5
22-23	0.001404	97,905	137	97,836	5,342,263	54.6
23-24	0.001451	97,767	142	97,696	5,244,427	53.6
24-25	0.001466	97,626	143	97,554	5,146,730	52.7
25-26	0.001470	97,482	143	97,411	5,049,176	51.8
26-27	0.001484	97,339	144	97,267	4,951,765	50.9
27-28	0.001507	97,195	146	97,121	4,854,499	49.9
28-29	0.001550	97,048	150	96,973	4,757,377	49.0
29-30	0.001610	96,898	156	96,820	4,660,404	48.1
30-31	0.001675	96,742	162	96,661	4,563,584	47.2
31-32	0.001743	96,580	168	96,496	4,466,923	46.3
32-33	0.001821	96,411	176	96,324	4,370,428	45.3
33-34	0.001908	96,236	184	96,144	4,274,104	44.4
34-35	0.002003	96,052	192	95,956	4,177,960	43.5
35-36	0.002113	95,860	203	95,759	4,082,004	42.6
36-37	0.002233	95,657	214	95,551	3,986,245	41.7
37-38	0.002352	95,444	225	95,332	3,890,694	40.8
38-39	0.002467	95,219	235	95,102	3,795,363	39.9
39-40	0.002585	94,984	246	94,862	3,700,261	39.0
40-41	0.002724	94,739	258	94,610	3,605,400	38.1
41-42	0.002888	94,481	273	94,344	3,510,790	37.2
42-43	0.003068	94,208	289	94,063	3,416,446	36.3
43-44	0.003266	93,919	307	93,765	3,322,382	35.4
44-45	0.003490	93,612	327	93,449	3,228,617	34.5
45-46	0.003732	93,285	348	93,111	3,135,168	33.6
46-47	0.004016	92,937	373	92,751	3,042,057	32.7
47-48	0.004374	92,564	405	92,362	2,949,306	31.9
48-49	0.004814	92,159	444	91,937	2,856,945	31.0
49-50	0.005314	91,715	487	91,472	2,765,008	30.1
50-51	0.005824	91,228	531	90,962	2,673,536	29.3
51-52	0.006345	90,697	575	90,409	2,582,573	28.5
52-53	0.006929	90,121	624	89,809	2,492,164	27.7
53-54	0.007597	89,497	680	89,157	2,402,355	26.8
54-55	0.008339	88,817	741	88,447	2,313,198	26.0
55-56	0.009116	88,076	803	87,675	2,224,752	25.3
56-57	0.009904	87,273	864	86,841	2,137,077	24.5
57-58	0.010730	86,409	927	85,946	2,050,235	23.7
58-59	0.011608	85,482	992	84,986	1,964,290	23.0
59-60	0.012550	84,490	1,060	83,960	1,879,304	22.2
60-61	0.013602	83,429	1,135	82,862	1,795,344	21.5

See footnote at end of table.

Table 16. Life table for non-Hispanic black population: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table16.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.014720	82,295	1,211	81,689	1,712,482	20.8
62–63	0.015798	81,083	1,281	80,443	1,630,793	20.1
63–64	0.016754	79,802	1,337	79,134	1,550,351	19.4
64–65	0.017613	78,465	1,382	77,774	1,471,217	18.7
65–66	0.018480	77,083	1,424	76,371	1,393,443	18.1
66–67	0.019457	75,659	1,472	74,923	1,317,072	17.4
67–68	0.020573	74,187	1,526	73,424	1,242,149	16.7
68–69	0.021926	72,660	1,593	71,864	1,168,726	16.1
69–70	0.023545	71,067	1,673	70,231	1,096,862	15.4
70–71	0.025492	69,394	1,769	68,510	1,026,631	14.8
71–72	0.027632	67,625	1,869	66,691	958,121	14.2
72–73	0.029854	65,756	1,963	64,775	891,431	13.6
73–74	0.032222	63,793	2,056	62,766	826,656	13.0
74–75	0.034785	61,738	2,148	60,664	763,890	12.4
75–76	0.037443	59,590	2,231	58,475	703,226	11.8
76–77	0.040266	57,359	2,310	56,204	644,752	11.2
77–78	0.043485	55,049	2,394	53,852	588,548	10.7
78–79	0.047244	52,656	2,488	51,412	534,695	10.2
79–80	0.051289	50,168	2,573	48,881	483,284	9.6
80–81	0.055804	47,595	2,656	46,267	434,402	9.1
81–82	0.060839	44,939	2,734	43,572	388,135	8.6
82–83	0.066151	42,205	2,792	40,809	344,564	8.2
83–84	0.071662	39,413	2,824	38,001	303,755	7.7
84–85	0.078536	36,589	2,874	35,152	265,754	7.3
85–86	0.086167	33,715	2,905	32,262	230,602	6.8
86–87	0.094269	30,810	2,904	29,358	198,340	6.4
87–88	0.102998	27,905	2,874	26,468	168,982	6.1
88–89	0.112376	25,031	2,813	23,625	142,514	5.7
89–90	0.122423	22,218	2,720	20,858	118,889	5.4
90–91	0.133153	19,498	2,596	18,200	98,031	5.0
91–92	0.144573	16,902	2,444	15,680	79,830	4.7
92–93	0.156685	14,458	2,265	13,326	64,150	4.4
93–94	0.169482	12,193	2,066	11,160	50,824	4.2
94–95	0.182949	10,127	1,853	9,200	39,665	3.9
95–96	0.197063	8,274	1,630	7,459	30,464	3.7
96–97	0.211788	6,643	1,407	5,940	23,006	3.5
97–98	0.227082	5,236	1,189	4,642	17,066	3.3
98–99	0.242890	4,047	983	3,556	12,424	3.1
99–100	0.259150	3,064	794	2,667	8,868	2.9
100 and over	1.000000	2,270	2,270	6,201	6,201	2.7

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 17. Life table for non-Hispanic black males: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.012173	100,000	1,217	98,940	7,187,503	71.9
1-2	0.000775	98,783	77	98,744	7,088,563	71.8
2-3	0.000436	98,706	43	98,685	6,989,818	70.8
3-4	0.000361	98,663	36	98,645	6,891,134	69.8
4-5	0.000258	98,628	25	98,615	6,792,488	68.9
5-6	0.000248	98,602	24	98,590	6,693,874	67.9
6-7	0.000219	98,578	22	98,567	6,595,284	66.9
7-8	0.000191	98,556	19	98,547	6,496,717	65.9
8-9	0.000158	98,537	16	98,529	6,398,170	64.9
9-10	0.000122	98,522	12	98,516	6,299,641	63.9
10-11	0.000097	98,510	10	98,505	6,201,125	62.9
11-12	0.000104	98,500	10	98,495	6,102,620	62.0
12-13	0.000168	98,490	17	98,482	6,004,125	61.0
13-14	0.000303	98,473	30	98,458	5,905,644	60.0
14-15	0.000491	98,443	48	98,419	5,807,185	59.0
15-16	0.000686	98,395	67	98,361	5,708,766	58.0
16-17	0.000880	98,328	87	98,284	5,610,405	57.1
17-18	0.001100	98,241	108	98,187	5,512,120	56.1
18-19	0.001337	98,133	131	98,067	5,413,933	55.2
19-20	0.001570	98,002	154	97,925	5,315,866	54.2
20-21	0.001802	97,848	176	97,760	5,217,941	53.3
21-22	0.002003	97,672	196	97,574	5,120,181	52.4
22-23	0.002140	97,476	209	97,372	5,022,607	51.5
23-24	0.002205	97,267	215	97,160	4,925,235	50.6
24-25	0.002218	97,053	215	96,945	4,828,075	49.7
25-26	0.002213	96,838	214	96,730	4,731,130	48.9
26-27	0.002217	96,623	214	96,516	4,634,400	48.0
27-28	0.002229	96,409	215	96,302	4,537,884	47.1
28-29	0.002263	96,194	218	96,085	4,441,582	46.2
29-30	0.002317	95,976	222	95,865	4,345,497	45.3
30-31	0.002371	95,754	227	95,641	4,249,631	44.4
31-32	0.002426	95,527	232	95,411	4,153,991	43.5
32-33	0.002501	95,295	238	95,176	4,058,579	42.6
33-34	0.002600	95,057	247	94,933	3,963,403	41.7
34-35	0.002720	94,810	258	94,681	3,868,470	40.8
35-36	0.002861	94,552	271	94,417	3,773,789	39.9
36-37	0.003009	94,281	284	94,140	3,679,372	39.0
37-38	0.003142	93,998	295	93,850	3,585,233	38.1
38-39	0.003249	93,702	304	93,550	3,491,382	37.3
39-40	0.003345	93,398	312	93,242	3,397,832	36.4
40-41	0.003463	93,086	322	92,924	3,304,591	35.5
41-42	0.003617	92,763	336	92,595	3,211,666	34.6
42-43	0.003796	92,428	351	92,252	3,119,071	33.7
43-44	0.004004	92,077	369	91,893	3,026,818	32.9
44-45	0.004251	91,708	390	91,513	2,934,926	32.0
45-46	0.004520	91,318	413	91,112	2,843,413	31.1
46-47	0.004842	90,906	440	90,686	2,752,301	30.3
47-48	0.005268	90,465	477	90,227	2,661,615	29.4
48-49	0.005812	89,989	523	89,727	2,571,388	28.6
49-50	0.006445	89,466	577	89,178	2,481,661	27.7
50-51	0.007100	88,889	631	88,574	2,392,483	26.9
51-52	0.007769	88,258	686	87,915	2,303,910	26.1
52-53	0.008510	87,572	745	87,200	2,215,994	25.3
53-54	0.009343	86,827	811	86,422	2,128,794	24.5
54-55	0.010263	86,016	883	85,575	2,042,373	23.7
55-56	0.011219	85,133	955	84,656	1,956,798	23.0
56-57	0.012202	84,178	1,027	83,665	1,872,143	22.2
57-58	0.013281	83,151	1,104	82,599	1,788,478	21.5
58-59	0.014500	82,047	1,190	81,452	1,705,879	20.8
59-60	0.015863	80,857	1,283	80,216	1,624,427	20.1
60-61	0.017418	79,574	1,386	78,881	1,544,212	19.4

See footnote at end of table.

Table 17. Life table for non-Hispanic black males: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.019067	78,188	1,491	77,443	1,465,330	18.7
62–63	0.020625	76,697	1,582	75,907	1,387,888	18.1
63–64	0.021925	75,116	1,647	74,292	1,311,981	17.5
64–65	0.023003	73,469	1,690	72,624	1,237,689	16.8
65–66	0.024052	71,779	1,726	70,915	1,165,065	16.2
66–67	0.025256	70,052	1,769	69,168	1,094,150	15.6
67–68	0.026611	68,283	1,817	67,375	1,024,982	15.0
68–69	0.028214	66,466	1,875	65,528	957,607	14.4
69–70	0.030150	64,591	1,947	63,617	892,079	13.8
70–71	0.032522	62,643	2,037	61,625	828,462	13.2
71–72	0.035162	60,606	2,131	59,540	766,837	12.7
72–73	0.037869	58,475	2,214	57,368	707,297	12.1
73–74	0.040766	56,261	2,294	55,114	649,929	11.6
74–75	0.043895	53,967	2,369	52,783	594,815	11.0
75–76	0.047267	51,598	2,439	50,379	542,033	10.5
76–77	0.050683	49,159	2,492	47,914	491,654	10.0
77–78	0.054363	46,668	2,537	45,399	443,740	9.5
78–79	0.058939	44,131	2,601	42,830	398,341	9.0
79–80	0.063822	41,530	2,651	40,205	355,511	8.6
80–81	0.069311	38,879	2,695	37,532	315,306	8.1
81–82	0.074905	36,184	2,710	34,829	277,774	7.7
82–83	0.080583	33,474	2,697	32,125	242,945	7.3
83–84	0.086417	30,777	2,660	29,447	210,820	6.8
84–85	0.094525	28,117	2,658	26,788	181,373	6.5
85–86	0.102644	25,459	2,613	24,153	154,585	6.1
86–87	0.111986	22,846	2,558	21,567	130,432	5.7
87–88	0.121994	20,288	2,475	19,050	108,865	5.4
88–89	0.132683	17,813	2,363	16,631	89,815	5.0
89–90	0.144060	15,449	2,226	14,336	73,184	4.7
90–91	0.156128	13,224	2,065	12,191	58,848	4.5
91–92	0.168880	11,159	1,885	10,217	46,657	4.2
92–93	0.182302	9,274	1,691	8,429	36,440	3.9
93–94	0.196370	7,584	1,489	6,839	28,011	3.7
94–95	0.211050	6,094	1,286	5,451	21,172	3.5
95–96	0.226299	4,808	1,088	4,264	15,720	3.3
96–97	0.242065	3,720	901	3,270	11,456	3.1
97–98	0.258285	2,820	728	2,455	8,186	2.9
98–99	0.274888	2,091	575	1,804	5,731	2.7
99–100	0.291796	1,516	443	1,295	3,927	2.6
100 and over	1.000000	1,074	1,074	2,632	2,632	2.5

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 18. Life table for non-Hispanic black females: United States, 2015Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table18.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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	0.010289	100,000	1,029	99,104	7,812,253	78.1
1-2	0.000552	98,971	55	98,944	7,713,149	77.9
2-3	0.000346	98,917	34	98,899	7,614,205	77.0
3-4	0.000263	98,882	26	98,869	7,515,306	76.0
4-5	0.000196	98,856	19	98,847	7,416,436	75.0
5-6	0.000191	98,837	19	98,827	7,317,590	74.0
6-7	0.000166	98,818	16	98,810	7,218,762	73.1
7-8	0.000147	98,802	15	98,794	7,119,952	72.1
8-9	0.000135	98,787	13	98,780	7,021,158	71.1
9-10	0.000129	98,774	13	98,767	6,922,378	70.1
10-11	0.000130	98,761	13	98,755	6,823,610	69.1
11-12	0.000138	98,748	14	98,741	6,724,856	68.1
12-13	0.000156	98,735	15	98,727	6,626,114	67.1
13-14	0.000182	98,719	18	98,710	6,527,387	66.1
14-15	0.000216	98,701	21	98,691	6,428,677	65.1
15-16	0.000253	98,680	25	98,667	6,329,987	64.1
16-17	0.000293	98,655	29	98,640	6,231,319	63.2
17-18	0.000344	98,626	34	98,609	6,132,679	62.2
18-19	0.000403	98,592	40	98,572	6,034,070	61.2
19-20	0.000466	98,552	46	98,529	5,935,498	60.2
20-21	0.000532	98,506	52	98,480	5,836,968	59.3
21-22	0.000592	98,454	58	98,425	5,738,488	58.3
22-23	0.000640	98,396	63	98,364	5,640,063	57.3
23-24	0.000673	98,333	66	98,300	5,541,699	56.4
24-25	0.000698	98,267	69	98,232	5,443,399	55.4
25-26	0.000722	98,198	71	98,163	5,345,167	54.4
26-27	0.000753	98,127	74	98,090	5,247,004	53.5
27-28	0.000796	98,053	78	98,014	5,148,914	52.5
28-29	0.000856	97,975	84	97,933	5,050,899	51.6
29-30	0.000930	97,891	91	97,846	4,952,966	50.6
30-31	0.001015	97,800	99	97,751	4,855,120	49.6
31-32	0.001104	97,701	108	97,647	4,757,369	48.7
32-33	0.001192	97,593	116	97,535	4,659,722	47.7
33-34	0.001273	97,477	124	97,415	4,562,187	46.8
34-35	0.001350	97,353	131	97,287	4,464,772	45.9
35-36	0.001435	97,221	139	97,152	4,367,485	44.9
36-37	0.001533	97,082	149	97,008	4,270,333	44.0
37-38	0.001643	96,933	159	96,854	4,173,325	43.1
38-39	0.001768	96,774	171	96,688	4,076,472	42.1
39-40	0.001908	96,603	184	96,511	3,979,783	41.2
40-41	0.002068	96,419	199	96,319	3,883,272	40.3
41-42	0.002242	96,219	216	96,111	3,786,954	39.4
42-43	0.002425	96,003	233	95,887	3,690,842	38.4
43-44	0.002614	95,771	250	95,645	3,594,955	37.5
44-45	0.002816	95,520	269	95,386	3,499,310	36.6
45-46	0.003033	95,251	289	95,107	3,403,924	35.7
46-47	0.003282	94,962	312	94,807	3,308,817	34.8
47-48	0.003578	94,651	339	94,481	3,214,011	34.0
48-49	0.003926	94,312	370	94,127	3,119,529	33.1
49-50	0.004311	93,942	405	93,739	3,025,402	32.2
50-51	0.004696	93,537	439	93,317	2,931,663	31.3
51-52	0.005089	93,098	474	92,861	2,838,346	30.5
52-53	0.005538	92,624	513	92,367	2,745,485	29.6
53-54	0.006064	92,111	559	91,832	2,653,118	28.8
54-55	0.006652	91,552	609	91,248	2,561,287	28.0
55-56	0.007277	90,943	662	90,612	2,470,039	27.2
56-57	0.007900	90,281	713	89,925	2,379,426	26.4
57-58	0.008518	89,568	763	89,187	2,289,502	25.6
58-59	0.009123	88,805	810	88,400	2,200,315	24.8
59-60	0.009734	87,995	857	87,567	2,111,915	24.0
60-61	0.010399	87,139	906	86,686	2,024,348	23.2

See footnote at end of table.

Table 18. Life table for non-Hispanic black females: United States, 2015—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/67_07/Table18.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	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
61–62	0.011122	86,232	959	85,753	1,937,662	22.5
62–63	0.011854	85,273	1,011	84,768	1,851,909	21.7
63–64	0.012572	84,263	1,059	83,733	1,767,141	21.0
64–65	0.013290	83,203	1,106	82,650	1,683,408	20.2
65–66	0.014046	82,097	1,153	81,521	1,600,758	19.5
66–67	0.014881	80,944	1,205	80,342	1,519,237	18.8
67–68	0.015851	79,740	1,264	79,108	1,438,895	18.0
68–69	0.017060	78,476	1,339	77,806	1,359,787	17.3
69–70	0.018495	77,137	1,427	76,424	1,281,981	16.6
70–71	0.020193	75,710	1,529	74,946	1,205,557	15.9
71–72	0.022039	74,181	1,635	73,364	1,130,612	15.2
72–73	0.023986	72,547	1,740	71,677	1,057,248	14.6
73–74	0.026061	70,806	1,845	69,884	985,571	13.9
74–75	0.028328	68,961	1,954	67,984	915,687	13.3
75–76	0.030587	67,008	2,050	65,983	847,703	12.7
76–77	0.033104	64,958	2,150	63,883	781,720	12.0
77–78	0.036134	62,808	2,269	61,673	717,837	11.4
78–79	0.039529	60,538	2,393	59,342	656,164	10.8
79–80	0.043267	58,145	2,516	56,887	596,822	10.3
80–81	0.047397	55,629	2,637	54,311	539,935	9.7
81–82	0.052377	52,993	2,776	51,605	485,624	9.2
82–83	0.057758	50,217	2,900	48,767	434,019	8.6
83–84	0.063434	47,317	3,001	45,816	385,252	8.1
84–85	0.070034	44,315	3,104	42,763	339,436	7.7
85–86	0.077469	41,212	3,193	39,615	296,672	7.2
86–87	0.085360	38,019	3,245	36,396	257,057	6.8
87–88	0.093927	34,774	3,266	33,141	220,660	6.3
88–89	0.103201	31,508	3,252	29,882	187,520	6.0
89–90	0.113210	28,256	3,199	26,657	157,638	5.6
90–91	0.123976	25,057	3,106	23,504	130,981	5.2
91–92	0.135515	21,951	2,975	20,463	107,478	4.9
92–93	0.147836	18,976	2,805	17,573	87,014	4.6
93–94	0.160937	16,171	2,602	14,869	69,441	4.3
94–95	0.174809	13,568	2,372	12,382	54,572	4.0
95–96	0.189428	11,196	2,121	10,136	42,189	3.8
96–97	0.204760	9,075	1,858	8,146	32,053	3.5
97–98	0.220760	7,217	1,593	6,421	23,907	3.3
98–99	0.237367	5,624	1,335	4,956	17,487	3.1
99–100	0.254511	4,289	1,092	3,743	12,530	2.9
100 and over	1.000000	3,197	3,197	8,787	8,787	2.7

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2015

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

Area and year	All races and origins			White			Black ¹			Hispanic ²			Non-Hispanic white ²			Non-Hispanic black ²		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
United States ³																		
2015 ⁴	78.7	76.3	81.1	78.9	76.6	81.3	75.5	72.2	78.5	81.9	79.3	84.3	78.7	76.3	81.0	75.1	71.9	78.1
2014 ⁴	78.9	76.5	81.3	79.1	76.7	81.4	75.6	72.5	78.5	82.1	79.4	84.5	78.8	76.5	81.2	75.3	72.2	78.2
2013 ⁴	78.8	76.4	81.2	79.0	76.7	81.4	75.5	72.3	78.4	81.9	79.2	84.2	78.8	76.5	81.2	75.1	71.9	78.1
2012 ⁴	78.8	76.4	81.2	79.1	76.7	81.4	75.5	72.3	78.4	81.9	79.3	84.3	78.9	76.5	81.2	75.1	71.9	78.1
2011 ⁴	78.7	76.3	81.1	79.0	76.6	81.3	75.3	72.2	78.2	81.8	79.2	84.2	78.7	76.4	81.1	75.0	71.8	77.8
2010 ⁴	78.7	76.2	81.0	78.9	76.5	81.3	75.1	71.8	78.0	81.7	78.8	84.3	78.8	76.4	81.1	74.7	71.5	77.7
2009 ^{4,5}	78.5	76.0	80.9	78.8	76.4	81.2	74.7	71.4	77.7	81.1	78.4	83.5	78.7	76.3	81.0	74.4	71.0	77.4
2008 ^{4,5}	78.2	75.6	80.6	78.5	76.1	80.9	74.3	70.9	77.3	80.8	78.0	83.3	78.4	76.0	80.7	73.9	70.5	77.0
2007 ^{4,5}	78.1	75.5	80.6	78.5	76.0	80.9	73.8	70.3	77.0	80.7	77.8	83.2	78.4	75.9	80.8	73.5	69.9	76.7
2006 ^{4,5}	77.8	75.2	80.3	78.3	75.8	80.7	73.4	69.9	76.7	80.3	77.5	82.9	78.2	75.7	80.6	73.1	69.5	76.4
2005 ^{4,5}	77.6	75.0	80.1	78.0	75.5	80.5	73.0	69.5	76.2	---	---	---	---	---	---	---	---	---
2004 ^{4,5}	77.6	75.0	80.1	78.1	75.5	80.5	72.9	69.4	76.1	---	---	---	---	---	---	---	---	---
2003 ^{4,5}	77.2	74.5	79.7	77.7	75.1	80.2	72.4	68.9	75.7	---	---	---	---	---	---	---	---	---
2002 ^{4,5}	77.0	74.4	79.6	77.5	74.9	80.1	72.2	68.7	75.4	---	---	---	---	---	---	---	---	---
2001 ^{4,5}	77.0	74.3	79.5	77.5	74.9	80.0	72.0	68.5	75.3	---	---	---	---	---	---	---	---	---
2000	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	77.1	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 ⁶	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	---	---	---	---	---	---	---	---	---

See footnotes at end of table.

Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2015—Con.

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

Area and year	All races and origins			White			Black ¹			Hispanic ²			Non-Hispanic white ²			Non-Hispanic black ²		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
United States ³ —Con.																		
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 ⁷	69.9	66.6	73.4	70.8	67.4	74.4	63.7	61.0	66.6	---	---	---	---	---	---	---	---	---
1962 ⁷	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	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---

See footnotes at end of table.

Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2015—Con.

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

Area and year	All races and origins			White			Black ¹			Hispanic ²			Non-Hispanic white ²			Non-Hispanic black ²		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Death-registration states—Con.																		
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	---	---	---	---	---	---	---	---	---

--- Data not available.

¹Prior to 1970, data for the black population are not available. Data shown for 1900–1969 are for the nonwhite population. See Technical Notes.²Life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied to data years 2010–2015; see Technical Notes.³Includes Alaska in 1959 and Hawaii in 1960.⁴Life expectancies for 2001–2015 were calculated using a revised methodology described in the Technical Notes.⁵Life expectancies for 2001–2009 have been re-estimated using new intercensal population estimates and may differ from data previously published; see Technical Notes.⁶Deaths based on a 50% sample.⁷Figures by race exclude data for residents of New Jersey; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Number of survivors out of 100,000 born alive, l_x											
	2015	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	99,411	99,305	99,064	98,740	97,998	97,407	97,024	95,290	94,028	92,515	88,538	87,552
5	99,312	99,176	98,877	98,495	97,668	96,998	96,482	94,220	91,978	83,389	83,887	81,804
10	99,254	99,097	98,766	98,347	97,460	96,765	96,177	93,710	91,106	88,129	82,458	80,052
15	99,181	98,998	98,635	98,196	97,261	96,551	95,885	93,235	90,385	87,144	81,506	78,963
20	98,943	98,664	98,215	97,741	96,716	96,111	95,366	92,435	89,089	85,441	80,074	77,239
25	98,503	98,203	97,671	97,110	96,000	95,517	94,676	91,335	87,269	83,146	78,046	74,768
30	97,980	97,751	97,070	96,477	95,307	94,905	93,919	90,078	85,302	80,642	75,779	72,043
35	97,357	97,201	96,322	95,808	94,482	94,144	92,976	88,573	83,118	77,961	73,127	69,078
40	96,609	96,422	95,373	94,926	93,322	93,064	91,648	86,650	80,557	75,114	70,042	65,890
45	95,619	95,274	94,154	93,599	91,587	91,378	89,634	84,069	77,343	72,036	66,561	62,436
50	94,158	93,601	92,370	91,526	88,972	88,756	86,591	80,487	73,321	68,429	62,460	58,514
55	91,867	91,232	89,658	88,348	85,110	84,711	82,176	75,557	68,182	63,947	57,555	53,852
60	88,559	87,642	85,537	83,726	79,529	79,067	75,921	68,924	61,563	58,079	51,138	47,946
65	84,055	82,330	79,519	77,107	71,933	71,147	67,555	60,366	53,195	50,560	43,194	40,911
70	78,066	74,891	71,357	68,248	61,984	60,857	56,987	49,655	42,768	41,090	33,816	32,390
75	69,559	64,644	60,449	56,799	49,705	48,170	43,903	36,735	30,789	29,729	23,552	22,960
80	57,811	50,885	47,084	43,180	35,285	33,576	29,313	22,883	18,580	18,298	13,712	13,529
85	42,192	34,515	31,770	27,960	20,908	18,542	15,785	11,073	8,542	8,683	6,001	6,053
90	24,285	18,496	17,046	14,154	9,297	7,080	6,144	3,796	2,998	2,941	1,868	1,867
95	9,292	6,879	6,282	5,043	2,786	1,524	1,511	857	636	646	361	344
100	1,935	1,479	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	99,361	99,239	98,961	98,607	97,755	97,087	96,661	94,762	93,440	91,745	87,505	86,426
5	99,250	99,095	98,754	98,333	97,395	96,643	96,077	93,624	91,294	88,505	82,718	80,548
10	99,185	99,008	98,627	98,160	97,151	96,375	95,726	93,054	90,346	87,184	81,249	78,775
15	99,101	98,890	98,464	97,972	96,904	96,107	95,366	92,508	89,561	86,156	80,261	77,681
20	98,774	98,426	97,854	97,316	96,126	95,491	94,695	91,617	88,220	84,440	78,792	75,984
25	98,135	97,747	97,049	96,361	95,040	94,631	93,791	90,385	86,359	82,252	76,675	73,472
30	97,399	97,114	96,166	95,430	94,072	93,826	92,861	89,009	84,346	79,890	74,378	70,747
35	96,569	96,385	95,091	94,501	92,997	92,889	91,760	87,371	82,075	77,514	71,614	67,752
40	95,615	95,389	93,761	93,345	91,541	91,572	90,207	85,246	79,357	74,432	68,297	64,447
45	94,409	93,940	92,139	91,649	89,369	89,492	87,819	82,336	75,882	71,244	64,518	60,849
50	92,657	91,818	89,865	89,007	86,070	86,199	84,158	78,254	71,518	67,553	60,118	56,736
55	89,881	88,897	86,492	84,936	81,139	81,039	78,781	72,627	65,981	62,965	54,970	51,939
60	85,842	84,551	81,378	79,012	73,958	73,887	71,246	65,142	58,909	56,917	48,343	45,895
65	80,330	78,241	73,971	70,646	64,318	64,177	61,566	55,776	50,154	49,218	40,264	38,736
70	73,317	69,491	64,107	59,681	52,296	52,244	49,950	44,588	39,516	39,668	31,023	30,217
75	63,777	57,688	51,385	46,272	38,797	38,950	36,756	31,864	27,718	28,316	21,213	21,076
80	51,163	42,769	36,749	31,810	24,921	25,300	25,237	18,995	16,172	17,128	11,942	12,084
85	35,290	26,527	21,815	18,020	13,168	12,845	11,750	8,693	7,107	7,920	5,059	5,179
90	18,475	12,473	9,878	7,732	5,107	4,609	4,197	2,787	2,283	2,527	1,502	1,508
95	6,037	3,855	2,927	2,279	1,326	970	955	586	451	556	289	262
100	999	645	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	99,462	99,375	99,172	98,880	98,254	97,744	97,406	95,848	94,728	93,383	89,623	88,733
5	99,376	99,261	99,006	98,666	97,955	97,371	96,908	94,848	92,789	90,380	85,117	83,119
10	99,326	99,190	98,911	98,544	97,784	97,173	96,652	94,402	92,008	89,186	83,728	81,390
15	99,265	99,111	98,814	98,432	97,636	97,016	96,431	94,000	91,364	88,247	82,813	80,307
20	99,121	98,915	98,597	98,184	97,331	96,756	96,066	93,293	90,116	86,556	81,418	78,555
25	98,891	98,682	98,325	97,883	96,966	96,418	95,583	92,322	88,328	84,135	79,481	76,119
30	98,591	98,418	98,013	97,551	96,544	95,996	94,933	91,182	86,398	81,463	77,247	73,394
35	98,179	98,052	97,596	97,140	95,966	95,409	94,206	89,810	84,304	78,713	74,719	70,463
40	97,640	97,493	97,033	96,531	95,097	94,560	93,101	88,092	81,927	75,907	71,894	67,407
45	96,867	96,648	96,222	95,570	93,793	93,265	91,469	85,856	79,041	72,954	68,755	64,121

See footnote at end of table.

Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Number of survivors out of 100,000 born alive, l_x											
	2015	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Female—Con.												
50.	95,700	95,425	94,932	94,060	91,852	91,327	89,075	82,828	75,456	69,452	65,001	60,415
55.	93,895	93,609	92,881	91,760	89,066	88,451	85,694	78,708	70,832	65,099	60,392	55,908
60.	91,312	90,767	89,742	88,414	85,139	84,430	80,890	73,093	64,795	59,438	54,226	50,155
65.	87,800	86,433	85,075	83,520	79,698	78,462	74,119	65,523	56,924	52,126	46,438	43,246
70.	82,827	80,219	78,522	76,720	71,955	70,100	64,873	55,449	46,774	42,741	36,916	34,721
75.	75,340	71,311	69,287	67,186	61,107	58,394	52,111	42,425	34,600	31,344	26,155	24,994
80.	64,422	58,455	56,986	54,372	46,445	43,063	36,486	27,524	21,578	19,613	15,682	15,129
85.	48,948	41,830	41,115	37,772	29,538	25,269	20,668	13,972	10,322	9,515	7,051	7,063
90.	29,772	23,936	23,666	20,578	14,160	10,056	8,548	5,044	3,656	3,314	2,269	2,306
95.	12,204	9,560	9,346	7,862	4,565	2,193	2,207	1,195	807	728	441	452
100.	2,724	2,183	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.	99,508	99,429	99,233	98,898	98,224	97,714	97,278	95,685	94,392	92,780	88,709	87,762
5.	99,419	99,313	99,068	98,675	97,930	97,353	96,790	94,713	92,466	89,771	84,147	82,071
10.	99,365	99,239	98,966	98,536	97,733	97,131	96,502	94,228	91,627	88,536	82,734	80,371
15.	99,296	99,146	98,843	98,391	97,546	96,928	96,228	93,792	90,982	87,633	81,816	79,344
20.	99,072	98,826	98,455	97,939	97,036	96,508	95,763	93,117	89,933	86,159	80,407	77,998
25.	98,652	98,406	97,972	97,340	96,406	95,965	95,169	92,213	88,454	84,106	78,392	75,202
30.	98,137	98,000	97,451	96,774	95,824	95,440	94,536	91,185	86,836	81,787	76,167	72,317
35.	97,518	97,506	96,810	96,192	95,152	94,798	93,750	89,941	85,004	79,277	73,568	69,522
40.	96,782	96,799	96,000	95,427	94,190	93,870	92,616	88,318	82,803	76,642	70,525	66,082
45.	95,808	95,759	94,932	94,257	92,681	92,374	90,847	86,069	79,989	73,705	67,090	62,920
50.	94,374	94,242	93,326	92,384	90,306	89,958	88,110	82,833	76,340	70,250	62,994	58,647
55.	92,125	92,050	90,833	89,427	86,688	86,173	84,027	78,218	71,551	65,875	58,163	54,450
60.	88,900	88,655	86,943	85,031	81,323	80,811	78,066	71,785	65,100	60,013	51,822	48,288
65.	84,518	83,518	81,123	78,585	73,889	73,102	69,850	63,201	56,655	52,411	43,904	41,505
70.	78,581	76,219	73,106	69,801	63,991	62,834	59,189	52,165	45,841	42,736	34,484	32,902
75.	70,065	66,022	62,175	58,299	51,586	49,895	45,688	38,610	33,406	31,086	24,151	23,356
80.	58,217	52,160	48,583	44,409	36,659	34,697	30,438	23,976	20,260	19,149	14,100	13,794
85.	42,381	35,461	32,850	28,768	21,578	19,017	16,239	11,483	9,325	9,078	6,178	6,192
90.	24,255	18,964	17,571	14,471	9,433	7,149	6,201	3,819	3,066	2,991	1,918	1,919
95.	9,091	6,971	6,416	5,067	2,743	1,521	1,500	801	636	643	364	355
100.	1,809	1,454	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.	99,467	99,373	99,138	98,769	97,994	97,408	96,931	95,188	93,768	91,975	87,674	86,655
5.	99,368	99,243	98,956	98,519	97,671	97,015	96,403	94,150	91,738	88,842	82,972	80,864
10.	99,307	99,163	98,839	98,357	97,441	96,758	96,069	93,601	90,810	87,530	81,519	79,109
15.	99,228	99,052	98,686	98,176	97,208	96,503	95,728	93,089	90,074	86,546	80,549	78,037
20.	98,928	98,616	98,134	97,525	96,480	95,908	95,104	92,293	88,904	84,997	79,116	76,376
25.	98,328	98,003	97,430	96,616	95,524	95,106	94,294	91,241	87,371	83,061	77,047	73,907
30.	97,612	97,436	96,662	95,783	94,716	94,401	93,489	90,092	85,707	80,888	74,810	71,219
35.	96,794	96,774	95,731	94,980	93,843	93,589	92,543	88,713	83,812	78,441	72,108	68,245
40.	95,862	95,859	94,588	93,984	92,631	92,427	91,173	86,880	81,457	75,733	68,848	64,954
45.	94,674	94,530	93,167	92,494	90,725	90,533	89,002	84,285	78,345	72,696	65,115	61,369
50.	92,952	92,588	91,124	90,105	87,690	87,424	85,601	80,521	74,288	69,107	60,741	57,274
55.	90,218	89,883	88,022	86,303	83,001	82,463	80,496	75,156	68,981	64,574	55,622	52,491
60.	86,274	85,773	83,182	80,625	75,969	75,485	73,172	67,787	61,933	58,498	48,987	46,452
65.	80,922	79,657	75,962	72,393	66,343	65,834	63,541	58,305	52,964	50,663	40,862	39,245
70.	73,995	71,039	66,181	61,384	54,138	53,825	51,735	46,739	41,880	40,873	31,527	30,640
75.	64,463	59,245	53,308	47,712	40,324	40,207	38,104	33,404	29,471	29,205	21,585	21,387
80.	51,743	44,121	38,245	32,788	25,885	25,993	24,005	19,860	17,221	17,655	12,160	12,266
85.	35,608	27,425	22,720	18,538	13,527	13,065	12,015	9,013	7,572	8,154	5,145	5,252
90.	18,550	12,840	10,214	7,891	5,125	4,600	4,209	2,812	2,356	2,568	1,523	1,523
95.	5,895	3,899	2,988	2,279	1,274	956	942	552	461	556	289	263
100.	914	625	523	404	189	115	118	65	40	61	31	22

See footnote at end of table.

Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Number of survivors out of 100,000 born alive, l_x											
	2015	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	99,551	99,488	99,333	99,035	98,468	98,036	97,645	96,211	95,037	93,608	89,774	88,939
5	99,473	99,385	99,187	98,841	98,203	97,709	97,199	95,309	93,216	90,721	85,349	83,426
10	99,426	99,319	99,099	98,725	98,042	97,525	96,960	94,890	92,466	89,564	83,979	81,723
15	99,367	99,245	99,007	98,618	97,902	97,375	96,756	94,534	91,894	88,712	83,093	80,680
20	99,222	99,049	98,795	98,374	97,618	97,135	96,454	93,984	90,939	87,281	81,750	78,978
25	98,995	98,835	98,547	98,093	97,299	96,844	96,072	93,228	89,524	85,163	79,865	76,588
30	98,693	98,602	98,283	97,802	96,945	96,499	95,605	92,320	87,972	82,740	77,676	73,887
35	98,284	98,282	97,939	97,445	96,474	96,026	94,977	91,211	86,248	80,206	75,200	70,971
40	97,754	97,790	97,472	96,913	95,762	95,326	94,080	89,805	84,256	77,624	72,425	67,935
45	96,999	97,049	96,768	96,065	94,649	94,228	92,725	87,920	81,780	74,871	69,341	64,677
50	95,864	95,962	95,608	94,710	92,924	92,522	90,685	85,267	78,572	71,547	65,629	61,005
55	94,109	94,293	93,730	92,594	90,383	89,967	87,699	81,520	74,321	67,323	61,053	56,509
60	91,612	91,615	90,789	89,451	86,726	86,339	83,279	76,200	68,462	61,704	54,900	50,752
65	88,204	87,449	86,339	84,764	81,579	80,739	76,773	68,701	60,499	54,299	47,086	43,806
70	83,268	81,400	79,984	78,139	74,101	72,507	67,545	58,363	49,932	44,638	37,482	35,206
75	75,765	72,595	70,834	68,712	63,290	60,461	54,397	44,685	37,024	32,777	26,569	25,362
80	64,752	59,721	58,454	55,770	48,182	44,676	38,026	28,882	23,053	20,492	15,929	15,349
85	49,097	42,848	42,274	38,774	30,490	26,046	21,348	14,487	10,937	9,909	7,152	7,149
90	29,718	24,491	24,270	20,996	14,406	10,219	8,662	5,061	3,719	3,372	2,291	2,322
95	11,966	9,680	9,495	7,900	4,526	2,203	2,200	1,109	797	721	434	448
100	2,566	2,147	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	98,861	98,578	98,187	97,885	96,731	95,732	95,407	92,584	92,035	90,379	79,784	76,609
5	98,708	98,382	97,884	97,522	96,207	95,051	94,482	90,983	89,303	86,174	70,691	66,222
10	98,626	98,271	97,720	97,322	95,928	94,745	94,060	90,339	88,258	84,690	68,437	63,410
15	98,529	98,139	97,539	97,134	95,661	94,460	93,646	89,591	87,156	83,180	66,410	61,060
20	98,194	97,701	96,925	96,652	94,887	93,880	92,738	87,839	84,386	79,641	63,165	57,931
25	97,574	96,946	95,972	95,804	93,513	92,925	91,321	85,210	80,320	74,973	59,608	54,512
30	96,863	96,143	94,809	94,680	91,934	91,699	89,584	82,194	75,962	70,492	56,112	51,287
35	96,021	95,164	93,260	93,288	89,977	90,046	87,402	78,683	71,141	65,865	52,125	48,007
40	94,972	93,809	91,239	91,439	87,304	87,766	84,478	74,466	65,974	61,244	47,866	44,518
45	93,595	91,770	88,689	88,834	83,700	84,501	80,507	69,284	59,827	56,442	43,054	40,628
50	91,622	88,761	85,285	85,044	78,938	80,172	74,976	62,702	53,141	51,422	37,800	36,103
55	88,560	84,657	80,635	79,816	72,826	73,893	67,660	54,846	45,558	45,803	32,233	31,404
60	84,017	79,007	74,335	72,913	65,250	65,795	58,593	46,318	37,654	39,418	26,046	25,698
65	77,782	71,704	66,154	64,391	56,102	56,038	48,649	37,838	30,015	32,738	19,806	20,474
70	70,220	62,349	56,192	54,617	45,785	45,434	38,616	29,654	22,505	25,585	14,021	14,960
75	60,498	50,987	44,872	43,274	34,262	34,531	28,968	21,798	15,546	18,011	9,139	9,956
80	48,499	37,964	33,149	31,711	23,710	24,815	20,003	14,408	9,589	11,376	5,158	5,750
85	34,490	24,677	21,352	19,939	15,044	15,337	12,433	8,326	4,900	5,794	2,414	2,782
90	20,023	13,204	11,646	10,713	8,087	7,195	6,394	4,077	2,044	2,317	913	1,054
95	8,516	5,368	4,729	4,463	3,252	1,777	2,010	1,557	638	689	324	296
100	2,334	1,491	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	98,760	98,437	98,023	97,703	96,394	95,301	94,911	91,772	91,268	89,499	78,065	74,674
5	98,580	98,219	97,688	97,300	95,826	94,570	93,921	90,082	88,412	85,195	68,589	64,385
10	98,488	98,093	97,501	97,061	95,497	94,234	93,453	89,393	87,311	83,768	66,377	61,730
15	98,373	97,930	97,268	96,826	95,161	93,874	92,965	88,610	86,152	82,332	64,478	59,667
20	97,868	97,275	96,301	96,132	94,053	93,108	91,941	86,968	83,621	79,057	61,426	56,733
25	96,926	96,103	94,809	94,827	91,904	91,825	90,285	84,227	79,516	74,540	57,736	53,285
30	95,878	94,940	93,070	93,125	89,584	90,270	88,327	80,979	75,083	70,344	54,073	49,867
35	94,720	93,641	90,827	91,080	86,885	88,331	85,940	77,221	70,049	65,873	49,865	46,541
40	93,348	91,945	87,948	88,490	83,441	85,744	82,832	72,780	64,710	61,353	45,414	42,989
45	91,674	89,439	84,467	84,997	78,976	82,075	78,686	67,346	58,432	56,589	40,563	39,230

See footnote at end of table.

Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Number of survivors out of 100,000 born alive, l_x											
	2015	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.												
50.	89,341	85,653	79,984	80,065	73,282	77,239	72,891	60,495	51,748	51,880	35,427	34,766
55.	85,685	80,529	74,095	73,413	66,101	70,351	65,122	52,426	44,436	46,581	29,754	29,987
60.	80,218	73,588	66,334	64,980	57,457	61,669	55,535	43,833	36,790	40,506	23,750	24,194
65.	72,521	64,980	56,795	55,061	47,485	51,392	45,198	35,371	29,314	34,042	17,806	19,015
70.	63,506	54,253	45,690	44,213	36,925	39,914	35,018	27,236	21,741	26,923	12,295	13,829
75.	52,519	41,693	33,755	32,717	25,921	29,064	25,472	19,456	14,419	18,854	7,494	8,892
80.	39,756	28,497	22,549	22,017	16,560	19,994	16,904	12,186	8,239	11,615	3,894	4,831
85.	26,155	16,532	12,709	12,383	9,648	11,620	9,898	6,444	3,660	5,605	1,747	2,030
90.	13,658	7,625	5,972	5,708	4,696	5,174	4,642	2,836	1,246	2,040	595	634
95.	4,982	2,565	1,971	2,009	1,721	1,240	1,342	961	307	552	189	137
100.	1,110	563	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.	98,966	98,723	98,356	98,073	97,076	96,172	95,913	93,416	92,796	91,251	81,493	78,525
5.	98,840	98,550	98,087	97,751	96,598	95,543	95,055	91,906	90,185	87,149	72,768	68,056
10.	98,767	98,456	97,946	97,590	96,369	95,265	94,679	91,308	89,201	85,607	70,508	65,111
15.	98,691	98,354	97,818	97,450	96,172	95,057	94,343	90,594	88,088	83,954	68,218	62,384
20.	98,532	98,141	97,566	97,180	95,729	94,660	93,544	88,736	85,078	80,154	64,764	59,053
25.	98,247	97,785	97,140	96,754	95,035	94,005	92,336	86,198	81,067	75,359	61,430	55,795
30.	97,871	97,314	96,514	96,150	94,114	93,070	90,799	83,384	76,816	70,633	58,281	52,773
35.	97,329	96,632	95,599	95,338	92,807	91,670	88,805	80,092	72,192	65,857	54,595	49,567
40.	96,579	95,588	94,364	94,137	90,817	89,676	86,052	76,084	67,271	61,130	50,568	46,146
45.	95,473	93,979	92,676	92,322	88,001	86,793	82,257	71,157	61,365	56,230	45,947	42,279
50.	93,833	91,680	90,277	89,563	84,168	82,979	77,007	64,885	54,920	50,780	40,886	37,681
55.	91,320	88,517	86,793	85,653	79,177	77,362	70,196	57,314	47,074	44,742	35,415	33,124
60.	87,630	84,044	81,886	80,293	72,820	69,941	61,758	48,928	38,761	37,954	28,908	27,524
65.	82,709	77,941	75,031	73,266	64,716	60,825	52,358	40,504	30,852	31,044	22,302	21,995
70.	76,456	69,778	66,278	64,729	54,873	51,274	42,612	32,354	23,341	24,107	15,871	16,140
75.	67,857	59,361	55,684	53,831	43,193	40,540	32,981	24,502	16,576	17,216	10,657	11,066
80.	56,513	46,453	43,622	41,686	31,756	30,315	23,712	17,039	10,822	11,151	6,324	6,708
85.	42,015	32,053	30,089	28,004	21,358	19,744	15,550	10,622	6,033	5,972	3,029	3,567
90.	25,628	18,347	17,536	16,260	12,210	9,675	8,590	5,652	2,774	2,579	1,206	1,492
95.	11,474	7,989	7,687	7,312	5,217	2,438	2,875	2,345	941	818	448	462
100.	3,273	2,351	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.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Average number of years of life remaining, e_x											
	2015	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	78.72	76.86	75.37	73.88	70.75	69.89	68.07	63.62	59.20	56.40	51.49	49.24
1	78.19	76.40	75.08	73.82	71.19	70.75	69.16	65.76	61.94	59.94	57.11	55.20
5	74.26	72.49	71.22	70.00	67.43	67.04	65.54	62.49	59.29	57.99	56.21	54.98
10	69.31	67.55	66.29	65.10	62.57	62.19	60.74	57.82	54.84	53.79	52.15	51.14
15	64.36	62.61	61.38	60.19	57.69	57.33	55.91	53.10	50.25	49.37	47.73	46.81
20	59.50	57.82	56.63	55.46	53.00	52.58	51.20	48.54	45.94	45.30	43.53	42.79
25	54.76	53.08	51.93	50.81	48.37	47.89	46.56	44.09	41.85	41.47	39.60	39.12
30	50.04	48.31	47.23	46.12	43.71	43.18	41.91	39.67	37.75	37.68	35.70	35.51
35	45.34	43.57	42.58	41.43	39.07	38.51	37.31	35.30	33.68	33.89	31.90	31.92
40	40.67	38.90	37.98	36.79	34.52	33.92	32.81	31.03	29.67	30.08	28.20	28.34
45	36.06	34.34	33.44	32.27	30.12	29.50	28.49	26.90	25.79	26.25	24.54	24.77
50	31.58	29.90	29.03	27.94	25.93	25.29	24.40	22.98	22.06	22.50	20.98	21.26
55	27.30	25.61	24.83	23.85	21.99	21.37	20.57	19.31	18.53	18.90	17.55	17.88
60	23.23	21.55	20.90	20.02	18.34	17.71	17.04	15.91	15.24	15.54	14.42	14.76
65	19.33	17.77	17.28	16.51	15.00	14.39	13.83	12.80	12.23	12.47	11.60	11.86
70	15.61	14.27	13.96	13.32	12.00	11.38	10.92	10.00	9.58	9.74	9.11	9.30
75	12.20	11.12	11.00	10.48	9.32	8.71	8.40	7.62	7.32	7.49	6.99	7.08
80	9.14	8.42	8.40	7.98	7.10	6.39	6.34	5.73	5.50	5.63	5.25	5.30
85	6.57	6.22	6.23	5.96	5.28	4.58	4.69	4.31	4.19	4.21	4.00	3.96
90	4.56	4.49	4.50	4.43	3.94	3.22	3.44	3.30	3.15	3.22	3.03	2.95
95	3.15	3.19	3.29	3.34	3.06	2.43	2.54	2.61	2.26	2.32	2.35	2.18
100	2.24	2.27	2.46	2.73	2.62	1.91	1.92	2.13	1.51	1.53	1.85	1.58
Male												
0	76.30	74.13	71.83	70.11	67.04	66.80	65.47	61.60	57.71	55.50	49.86	47.88
1	75.79	73.70	71.58	70.10	67.58	67.80	66.73	64.00	60.75	59.47	55.95	54.35
5	71.87	69.80	67.73	66.29	63.82	64.10	63.12	60.76	58.14	57.60	55.11	54.22
10	66.92	64.86	62.81	61.41	58.98	59.27	58.35	56.12	53.75	53.44	51.07	50.39
15	61.97	59.94	57.91	56.52	54.12	54.43	53.56	51.43	49.18	49.05	46.66	46.06
20	57.17	55.21	53.25	51.88	49.54	49.77	48.92	46.91	44.88	44.99	42.48	42.03
25	52.52	50.57	48.67	47.37	45.07	45.19	44.36	42.51	40.79	41.11	38.59	38.38
30	47.90	45.89	44.10	42.81	40.51	40.56	39.78	38.13	36.71	37.26	34.70	34.76
35	43.29	41.21	39.57	38.20	35.95	35.94	35.23	33.79	32.65	33.43	30.94	31.19
40	38.70	36.62	35.09	33.64	31.48	31.42	30.79	29.57	28.68	29.63	27.32	27.65
45	34.16	32.14	30.66	29.22	27.18	27.09	26.55	25.52	24.87	25.84	23.77	24.14
50	29.75	27.82	26.37	25.00	23.12	23.02	22.59	21.72	21.25	22.11	20.32	20.70
55	25.59	23.65	22.30	21.08	19.36	19.32	18.96	18.20	17.79	18.53	16.98	17.38
60	21.67	19.73	18.53	17.46	15.99	15.94	15.68	14.99	14.62	15.22	13.95	14.33
65	17.98	16.11	15.12	14.21	12.99	12.95	12.74	12.07	11.72	12.20	11.24	11.50
70	14.45	12.80	12.05	11.35	10.39	10.33	10.11	9.46	9.18	9.52	8.83	9.02
75	11.21	9.89	9.39	8.90	8.13	7.99	7.83	7.22	7.02	7.31	6.75	6.84
80	8.34	7.44	7.12	6.80	6.27	5.95	5.94	5.44	5.27	5.49	5.10	5.11
85	5.93	5.47	5.31	5.13	4.73	4.39	4.41	4.11	4.02	4.10	3.90	3.82
90	4.08	3.95	3.89	3.89	3.60	3.18	3.30	3.17	3.06	3.21	3.01	2.86
95	2.82	2.82	2.92	2.98	2.82	2.43	2.49	2.52	2.21	2.38	2.36	2.13
100	2.02	2.03	2.25	2.49	2.43	1.91	1.92	2.05	1.50	1.58	1.81	1.55
Female												
0	81.11	79.47	78.81	77.62	74.64	73.24	70.96	65.89	60.90	57.40	53.24	50.70
1	80.55	78.97	78.47	77.50	74.97	73.93	71.84	67.73	65.37	60.45	58.37	56.10
5	76.62	75.06	74.60	73.67	71.19	70.21	68.21	64.43	60.66	58.41	57.39	55.80
10	71.66	70.11	69.67	68.75	66.31	65.35	63.38	59.73	56.16	54.16	53.31	51.94
15	66.70	65.16	64.73	63.83	61.41	60.45	58.52	54.97	51.54	49.71	48.87	47.60
20	61.79	60.29	59.87	58.98	56.59	55.60	53.73	50.37	47.21	45.63	44.66	43.60
25	56.93	55.42	55.03	54.16	51.80	50.79	48.99	45.87	43.11	41.86	40.69	39.92
30	52.09	50.57	50.19	49.33	47.01	46.00	44.28	41.41	39.02	38.15	36.79	36.30
35	47.30	45.75	45.40	44.53	42.28	41.27	39.63	37.01	34.92	34.40	32.95	32.71
40	42.55	40.99	40.65	39.80	37.64	36.61	35.06	32.68	30.86	30.58	29.15	29.08
45	37.87	36.33	35.97	35.17	33.13	32.09	30.64	28.46	26.89	26.71	25.36	25.44

See footnote at end of table.

Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Average number of years of life remaining, e_x											
	2015	1999–2001	1989–1991	1979–1981	1969–1971	1959–1961	1949–1951	1939–1941	1929–1931	1919–1921	1909–1911	1900–1902
Female—Con.												
50.....	33.30	31.76	31.42	30.69	28.77	27.71	26.40	24.40	23.05	22.92	21.67	21.84
55.....	28.88	27.32	27.05	26.39	24.59	23.53	22.33	20.54	19.38	19.28	18.13	18.39
60.....	24.63	23.10	22.90	22.29	20.60	19.52	18.50	16.92	15.94	15.87	14.90	15.21
65.....	20.51	19.12	19.02	18.44	16.83	15.80	14.95	13.57	12.78	12.73	11.96	12.22
70.....	16.58	15.40	15.38	14.84	13.35	12.37	11.71	10.56	9.99	9.96	9.38	9.59
75.....	12.96	11.99	12.08	11.58	10.26	9.33	8.94	8.01	7.61	7.65	7.20	7.34
80.....	9.71	9.05	9.13	8.69	7.68	6.72	6.67	5.99	5.70	5.75	5.37	5.51
85.....	6.95	6.62	6.66	6.38	5.63	4.71	4.90	4.47	4.32	4.30	4.08	4.12
90.....	4.79	4.71	4.73	4.66	4.14	3.25	3.54	3.39	3.24	3.23	3.05	3.04
95.....	3.27	3.29	3.40	3.48	3.18	2.43	2.57	2.67	2.30	2.27	2.34	2.24
100.....	2.28	2.29	2.52	2.81	2.69	1.91	1.93	2.17	1.52	1.48	1.91	1.61
White												
0.....	78.92	77.43	76.13	74.53	71.62	70.73	69.02	64.92	60.86	57.42	51.90	49.64
1.....	78.31	76.87	75.72	74.35	71.91	71.38	69.95	66.84	63.46	60.87	57.46	55.47
5.....	74.37	72.96	71.84	70.52	68.12	67.64	66.29	63.52	60.75	58.86	56.51	55.18
10.....	69.41	68.01	66.92	65.62	63.26	62.79	61.48	58.83	56.29	54.65	52.43	51.34
15.....	64.46	63.07	61.99	60.71	58.37	57.92	56.65	54.09	51.69	50.21	48.01	47.01
20.....	59.60	58.27	57.23	55.98	53.66	53.16	51.91	49.47	47.28	46.04	43.77	43.17
25.....	54.84	53.51	52.50	51.30	49.00	48.44	47.22	44.92	43.02	42.07	39.79	39.26
30.....	50.12	48.72	47.76	46.59	44.28	43.69	42.52	40.40	38.76	38.17	35.86	35.51
35.....	45.42	43.95	43.06	41.86	39.58	38.97	37.86	35.93	34.50	34.27	32.03	32.01
40.....	40.74	39.25	38.41	37.17	34.95	34.33	33.29	31.54	30.33	30.38	28.29	28.28
45.....	36.13	34.65	33.81	32.60	30.48	29.84	28.88	27.29	26.29	26.45	24.60	24.82
50.....	31.64	30.17	29.34	28.21	26.21	25.57	24.70	23.26	22.42	22.64	21.01	21.18
55.....	27.35	25.82	25.08	24.05	22.19	21.58	20.77	19.47	18.75	18.97	17.57	17.91
60.....	23.24	21.71	21.08	20.16	18.48	17.84	17.15	15.98	15.37	15.57	14.43	14.73
65.....	19.31	17.88	17.40	16.59	15.08	14.44	13.86	12.80	12.28	12.47	11.60	11.87
70.....	15.57	14.34	14.02	13.35	12.01	11.37	10.89	9.96	9.58	9.72	9.10	9.31
75.....	12.14	11.15	11.03	10.47	9.27	8.65	8.34	7.55	7.30	7.47	6.98	7.08
80.....	9.08	8.42	8.39	7.95	7.01	6.33	6.27	5.64	5.45	5.59	5.22	5.30
85.....	6.50	6.19	6.20	5.90	5.19	4.53	4.62	4.20	4.12	4.15	3.97	3.95
90.....	4.48	4.44	4.46	4.36	3.84	3.20	3.41	3.16	3.10	3.17	3.00	2.93
95.....	3.08	3.14	3.25	3.25	2.92	2.43	2.53	2.45	2.22	2.28	2.29	2.16
100.....	2.18	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.....	76.57	74.78	72.72	70.82	67.94	67.55	66.31	62.81	59.12	56.34	50.23	48.23
1.....	75.98	74.25	72.35	70.70	68.33	68.34	67.41	64.98	62.04	60.24	56.26	54.61
5.....	72.06	70.34	68.48	66.87	64.55	64.61	63.77	61.68	59.38	58.31	55.37	54.43
10.....	67.10	65.40	63.55	61.98	59.69	59.78	58.98	57.03	54.96	54.15	51.32	50.59
15.....	62.15	60.47	58.65	57.09	54.83	54.93	54.18	52.33	50.39	49.74	46.91	46.25
20.....	57.33	55.72	53.96	52.45	50.22	50.25	49.52	47.76	46.02	45.60	42.71	42.19
25.....	52.66	51.05	49.33	47.92	45.70	45.65	44.93	43.28	41.78	41.60	38.79	38.52
30.....	48.03	46.34	44.71	43.31	41.07	40.97	40.29	38.80	37.54	37.65	34.87	34.88
35.....	43.42	41.64	40.12	38.66	36.43	36.31	35.68	34.36	33.33	33.74	31.08	31.29
40.....	38.81	37.01	35.57	34.04	31.87	31.73	31.17	30.03	29.22	29.86	27.43	27.74
45.....	34.27	32.49	31.07	29.55	27.48	27.34	26.87	25.87	25.28	26.00	23.86	24.21
50.....	29.85	28.12	26.71	25.26	23.34	23.22	22.83	21.96	21.51	22.22	20.39	20.76
55.....	25.68	23.88	22.56	21.25	19.51	19.45	19.11	18.34	17.97	18.59	17.03	17.42
60.....	21.73	19.90	18.71	17.56	16.07	16.01	15.76	15.05	14.72	15.25	13.98	14.35
65.....	17.99	16.22	15.24	14.26	13.02	12.97	12.75	12.07	11.77	12.21	11.25	11.51
70.....	14.43	12.87	12.11	11.35	10.38	10.29	10.07	9.42	9.20	9.51	8.83	9.03
75.....	11.18	9.92	9.40	8.87	8.06	7.92	7.77	7.17	7.02	7.30	6.75	6.84
80.....	8.29	7.43	7.11	6.76	6.18	5.89	5.88	5.38	5.26	5.47	5.09	5.10
85.....	5.88	5.43	5.28	5.09	4.63	4.34	4.35	4.02	3.99	4.06	3.88	3.81
90.....	4.00	3.90	3.85	3.83	3.49	3.16	3.27	3.06	3.03	3.18	2.99	2.85
95.....	2.74	2.77	2.88	2.91	2.67	2.43	2.48	2.40	2.19	2.36	2.31	2.12
100.....	1.96	1.98	2.21	2.41	2.20	1.91	1.92	1.96	1.49	1.58	1.68	1.55

See footnote at end of table.

Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Average number of years of life remaining, e_x											
	2015	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	81.26	79.99	79.45	78.22	75.49	74.19	72.03	67.29	62.67	58.53	53.62	51.08
1	80.63	79.40	78.99	77.98	75.66	74.68	72.77	68.93	64.93	61.51	58.69	56.39
5	76.69	75.48	75.10	74.13	71.86	70.92	69.09	65.57	62.17	59.43	57.67	56.03
10	71.72	70.53	70.16	69.21	66.97	66.05	64.26	60.85	57.65	55.17	53.57	52.15
15	66.76	65.58	65.23	64.29	62.07	61.15	59.39	56.07	53.00	50.67	49.12	47.79
20	61.86	60.70	60.36	59.44	57.24	56.29	54.56	51.38	48.52	46.46	44.88	43.77
25	56.99	55.83	55.51	54.60	52.42	51.45	49.77	46.78	44.25	42.55	40.88	40.05
30	52.16	50.95	50.65	49.76	47.60	46.63	45.00	42.21	39.99	38.72	36.96	36.42
35	47.37	46.11	45.82	44.93	42.82	41.84	40.28	37.70	35.73	34.86	33.09	32.82
40	42.61	41.33	41.03	40.16	38.12	37.13	35.64	33.25	31.52	30.94	29.26	29.17
45	37.92	36.62	36.30	35.49	33.54	32.53	31.12	28.90	27.39	26.98	25.45	25.51
50	33.34	32.01	31.71	30.96	29.11	28.08	26.76	24.72	23.41	23.12	21.74	21.89
55	28.91	27.53	27.29	26.61	24.85	23.81	22.58	20.73	19.60	19.40	18.18	18.43
60	24.62	23.25	23.09	22.45	20.79	19.69	18.64	17.00	16.05	15.93	14.92	15.23
65	20.47	19.23	19.14	18.55	16.93	15.88	15.00	13.56	12.81	12.75	11.97	12.23
70	16.53	15.47	15.46	14.89	13.37	12.38	11.68	10.50	9.98	9.94	9.38	9.59
75	12.90	12.02	12.11	11.58	10.21	9.28	8.87	7.92	7.56	7.62	7.20	7.33
80	9.65	9.04	9.12	8.65	7.59	6.67	6.59	5.88	5.63	5.70	5.35	5.50
85	6.89	6.59	6.62	6.32	5.54	4.66	4.83	4.34	4.24	4.24	4.06	4.10
90	4.72	4.67	4.69	4.59	4.05	3.23	3.51	3.24	3.17	3.16	3.00	3.02
95	3.20	3.24	3.36	3.39	3.04	2.43	2.56	2.47	2.24	2.20	2.27	2.21
100	2.23	2.24	2.49	2.70	2.49	1.91	1.92	1.95	1.48	1.42	1.74	1.58
Black¹												
0	75.47	71.81	69.16	68.52	64.11	63.91	60.73	53.85	48.53	47.03	35.87	33.80
1	75.34	71.84	69.43	68.99	65.27	65.75	62.65	57.15	51.71	51.01	43.84	43.00
5	71.46	67.98	65.64	65.25	61.62	62.21	59.25	54.13	49.25	49.44	45.34	45.55
10	66.51	63.05	60.75	60.38	56.79	57.41	54.50	49.50	44.80	45.26	41.74	42.46
15	61.58	58.13	55.86	55.49	51.94	52.57	49.73	44.89	40.37	41.02	38.02	39.04
20	56.78	53.38	51.19	50.75	47.34	47.88	45.19	40.73	36.62	37.72	34.86	36.03
25	52.12	48.78	46.67	46.18	43.00	43.35	40.85	36.91	33.32	34.91	31.72	33.04
30	47.48	44.16	42.22	41.69	38.70	38.89	36.59	33.17	30.07	31.98	28.43	29.96
35	42.88	39.59	37.87	37.28	34.48	34.56	32.44	29.53	26.94	29.07	25.39	26.82
40	38.32	35.12	33.65	32.98	30.46	30.39	28.48	26.06	23.82	26.07	22.41	23.73
45	33.85	30.84	29.55	28.87	26.65	26.46	24.75	22.82	20.97	23.17	19.58	20.67
50	29.52	26.80	25.62	25.03	23.11	22.74	21.38	19.94	18.22	20.17	16.84	17.95
55	25.45	22.97	21.95	21.50	19.83	19.45	18.41	17.43	15.80	17.33	14.33	15.23
60	21.68	19.43	18.59	18.29	16.83	16.53	15.87	15.18	13.62	14.72	12.16	13.06
65	18.21	16.14	15.56	15.37	14.16	13.96	13.59	13.02	11.49	12.22	10.22	10.87
70	14.89	13.18	12.87	12.67	11.77	11.63	11.48	10.93	9.54	9.90	8.59	8.96
75	11.87	10.54	10.48	10.32	9.89	9.52	9.48	8.97	7.84	8.00	7.08	7.24
80	9.17	8.29	8.30	8.17	8.20	7.28	7.62	7.31	6.19	6.22	5.80	5.79
85	6.86	6.41	6.51	6.54	6.54	5.27	5.79	5.91	4.92	4.88	4.80	4.56
90	5.03	4.90	4.94	5.13	5.09	3.48	3.97	4.64	3.83	3.84	4.26	3.60
95	3.68	3.71	3.82	4.08	4.28	2.43	2.70	3.51	2.83	2.90	3.31	2.82
100	2.72	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	72.24	68.17	64.47	64.10	60.00	61.48	58.91	52.26	47.55	47.14	34.05	32.54
1	72.15	68.25	64.76	64.60	61.24	63.50	61.06	55.93	51.08	51.63	42.53	42.46
5	68.28	64.40	60.98	60.86	57.60	59.98	57.69	52.95	48.69	50.18	44.25	45.06
10	63.34	59.48	56.09	56.01	52.79	55.19	52.96	48.34	44.27	45.99	40.65	41.90
15	58.41	54.57	51.22	51.14	47.96	50.39	48.23	43.74	39.83	41.75	36.77	38.26
20	53.69	49.92	46.71	46.48	43.49	45.78	43.73	39.52	35.95	38.36	33.46	35.11
25	49.19	45.50	42.40	42.09	39.45	41.38	39.49	35.72	32.67	35.54	30.44	32.21
30	44.70	41.02	38.14	37.81	35.40	37.05	35.31	32.05	29.45	32.51	27.33	29.25
35	40.22	36.56	34.02	33.60	31.42	32.81	31.21	28.48	26.39	29.54	24.42	26.16
40	35.77	32.18	30.05	29.51	27.61	28.72	27.29	25.06	23.36	26.53	21.57	23.12
45	31.38	28.01	26.18	25.61	24.03	24.89	23.59	21.88	20.59	23.55	18.85	20.09

See footnote at end of table.

Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2015—Con.

[Includes Alaska and Hawaii 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 District of Columbia; and 1919–1921, 34 states and District of Columbia. Beginning in 1970, excludes deaths of nonresidents of the United States; see Technical Notes]

Age (years), race, and sex	Average number of years of life remaining, e_x											
	2015	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.												
50.	27.12	24.13	22.50	22.03	20.69	21.28	20.25	19.06	17.92	20.47	16.21	17.34
55.	23.17	20.50	19.08	18.79	17.66	18.11	17.36	16.60	15.46	17.50	13.82	14.69
60.	19.57	17.19	16.01	15.89	14.93	15.29	14.91	14.37	13.15	14.74	11.67	12.62
65.	16.37	14.12	13.27	13.29	12.53	12.84	12.75	12.21	10.87	12.07	9.74	10.38
70.	13.33	11.40	10.88	10.94	10.40	10.81	10.74	10.11	8.78	9.58	8.00	8.33
75.	10.58	9.07	8.84	8.90	8.76	8.93	8.83	8.17	6.99	7.61	6.58	6.60
80.	8.15	7.12	7.01	7.03	7.35	6.87	7.07	6.58	5.42	5.83	5.53	5.12
85.	6.10	5.52	5.58	5.61	5.92	5.08	5.38	5.34	4.30	4.53	4.48	4.04
90.	4.46	4.23	4.24	4.47	4.68	3.42	3.78	4.23	3.42	3.60	4.01	3.21
95.	3.27	3.24	3.37	3.62	3.92	2.43	2.64	3.20	2.54	2.61	3.15	2.50
100.	2.44	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.	78.45	75.16	73.73	72.88	68.32	66.47	62.70	55.56	49.51	46.92	37.67	35.04
1.	78.27	75.13	73.96	73.31	69.37	68.10	64.37	58.46	52.33	50.39	45.15	43.54
5.	74.37	71.26	70.16	69.54	65.70	64.54	60.93	55.40	49.81	48.70	46.42	46.04
10.	69.42	66.32	65.26	64.65	60.85	59.72	56.17	50.75	45.33	44.54	42.84	43.02
15.	64.48	61.39	60.34	59.74	55.97	54.85	51.36	46.13	40.87	40.36	39.18	39.79
20.	59.57	56.52	55.49	54.90	51.22	50.07	46.77	42.04	37.22	37.15	36.14	36.89
25.	54.74	51.71	50.72	50.13	46.57	45.40	42.35	38.20	33.93	34.35	32.97	33.90
30.	49.94	46.95	46.03	45.43	42.00	40.83	38.02	34.40	30.67	31.48	29.61	30.70
35.	45.20	42.26	41.45	40.79	37.56	36.41	33.82	30.83	27.47	28.58	26.44	27.52
40.	40.53	37.69	36.96	36.28	33.32	32.16	29.82	27.19	24.30	25.60	23.34	24.37
45.	35.97	33.29	32.58	31.94	29.31	28.14	26.07	23.89	21.39	22.61	20.43	21.36
50.	31.56	29.06	28.38	27.84	25.52	24.31	22.67	20.95	18.60	19.76	17.65	18.67
55.	27.35	25.01	24.41	24.00	21.97	20.89	19.62	18.38	16.27	17.09	14.98	15.88
60.	23.39	21.20	20.71	20.42	18.66	17.83	16.95	16.10	14.22	14.69	12.78	13.60
65.	19.63	17.65	17.37	17.13	15.67	15.12	14.54	13.95	12.24	12.41	10.82	11.38
70.	16.02	14.41	14.32	14.05	13.02	12.46	12.29	11.82	10.38	10.25	9.22	9.62
75.	12.72	11.49	11.56	11.37	10.85	10.10	10.15	9.81	8.62	8.37	7.55	7.90
80.	9.75	8.96	9.05	8.95	8.87	7.66	8.15	8.02	6.90	6.58	6.05	6.48
85.	7.22	6.86	6.99	7.09	7.00	5.44	6.15	6.41	5.48	5.22	5.09	5.10
90.	5.23	5.16	5.24	5.47	5.41	3.52	4.13	4.96	4.20	4.07	4.50	4.01
95.	3.76	3.84	3.97	4.30	4.58	2.43	2.74	3.71	3.09	3.18	3.45	3.15
100.	2.74	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 1949–1951, data shown are for the entire nonwhite population. During these periods, life tables were not constructed for the black population. See Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Technical Notes

The life table program

Three series of complete life tables for the U.S. population are prepared by the National Center for Health Statistics (NCHS). *Decennial life tables* are based on decennial U.S. census data and final deaths for a 3-year period around the census year. *Annual preliminary life tables* are based on a sample of approximately 90% of death records. *Annual final life tables* (referred to here 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 to 1996, the annual life tables were abridged life tables, closed at age 85 and over, and were constructed by reference to a standard table (4). Beginning with 1997 mortality data, a new methodology similar to that of the 1989–1991 decennial life tables was employed to estimate annual complete life tables to age 100, with combined life table values presented for ages 100 and over (9). The methodology was again revised for data years 2000–2007 using a methodology similar to that of the 1999–2001 decennial life tables (10). Beginning with data year 2008, the life table methodology was refined by changing the smoothing technique used to estimate the life table functions at the oldest ages (11).

The methodology used to estimate the 2008–2015 life tables is different from that used to estimate the 2000–2007 life tables with respect to the technique used to estimate the probabilities of death for ages over 65. The methodology used to produce the life tables for 2008–2015 does not model the probabilities of death beginning at age 66, as was done for data years 2000–2007, but rather at ages above 85 or so. (The exact ages at which smoothing techniques are used depends on the specific racial and ethnic population.) Research into the methodology developed and used for the 1999–2001 decennial life tables and applied to the annual life tables has revealed that it is not necessary to model (or "smooth") the probabilities of death beginning at age 66. The observed blended vital statistics and Medicare data for ages 66–85 are robust enough and do not require additional smoothing (11). A full description of the methodology used to estimate the 2015 life tables is provided below. See "United States Life Tables, 2005" (10) for a detailed description of the methodology used for data years 2000–2007.

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 the Hispanic-origin population. Recent research that identified and quantified these data limitations has led to the development of reliable methodological strategies to address these data problems (5, 12–14). The 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" (12).

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 report 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 (available from: <https://www.cdc.gov/nchs/products/vsus.htm>). Life table values for 1991–1999 presented in this report are based on postcensal population estimates of the population enumerated in the 1990 decennial census. Life table values for 2001–2009 presented in this report are based on revised intercensal population estimates based on the 2010 decennial census and the revised methodology used to estimate the 2008–2015 life tables. As a result, the values may differ from those previously published in annual final mortality and life table reports (15). The revised intercensal life tables for years 2001–2009 can be accessed by links provided under each of the annual life table reports at: https://www.cdc.gov/nchs/products/life_tables.htm.

Geographic coverage

The geographic areas covered in life tables before 1929–1931 were limited to 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), and tables for 1919–1921 used mortality data from the 1920 death-registration states (34 states and the District of Columbia). 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 20 and 21). Data for each year shown in Table 19 include Alaska beginning in 1959 and Hawaii beginning in 1960. However, it is believed that the inclusion of these two states does not materially affect life table values.

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% of the New Jersey death records for 1964 did not contain the race designation. When the records were electronically processed for this state, the "race not stated" deaths were allocated proportionally to white or to black.

Nonresidents

Beginning in 1970, the deaths of nonresidents of the United States have been 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 20 and 21, values for the black population during the periods 1939–1941 and 1949–1951 were

estimated using values for the nonwhite population. Life table functions were also missing in [Tables 20](#) and [21](#) for some race-sex groups for the periods from 1900–1902 to 1939–1941. Values were missing for the following groups:

<i>Years</i>	<i>Race and sex</i>
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 values 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 values in [Table 19](#) by race and sex for the following years were estimated using a procedure other than the abridged life table methodology (16):

<i>Years</i>	<i>Race and sex</i>
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 19](#), life expectancy for the black population for years prior to 1970 is estimated using values for the total nonwhite population.

Data for calculating life table functions

The data used to prepare the U.S. life tables include final death counts from the National Vital Statistics System (NVSS), population estimates from the U.S. Census Bureau, and death and population counts for Medicare beneficiaries aged 66–99 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 2015 collected from death certificates filed in state vital statistics offices and reported to NCHS as part of NVSS. Race and Hispanic origin are reported separately on the death certificate.

The U.S. Standard Certificate of Death was revised in 2003, and its race and Hispanic-origin items reflect the mandate of the 1997 Office of Management and Budget (OMB) standards (17). 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. In 2015, 48 states and the District of Columbia had adopted the 1997 OMB standards, while 2 others continued to collect race and ethnicity data according to the 1977 OMB standards

(6,18). To attain uniformity and comparability during the transition period until all states implement the 1997 standards, multiple-race responses are "bridged" back to the 1977 single-race standard, and Asian and Pacific Islander groups are combined according to the 1977 standards. The bridging procedure is the same as that used to bridge multiple-race population estimates, as discussed below (19).

Census population data

The population data 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 2010 census. Reflecting the 1997 OMB guidelines on race and ethnicity reporting (17), the 2010 census included an option for individuals to report more than one race and provided for the reporting of Asian persons separately from Native Hawaiian or Other Pacific Islander (NHOPI) persons. Death certificate data by race for states that have not yet implemented the 1997 OMB standards are thus currently incompatible with the population data collected in the 2010 census (the denominators for the rates). To produce death rates for 2015, it was necessary to bridge the reported population data for multiple-race persons back to single-race categories. In addition, the 2010 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 a combined category (Asian or Pacific Islander) and to reflect age as of the census reference date (20). The procedures used to produce the bridged populations are described elsewhere (19).

Medicare data

Medicare data have traditionally been employed in the estimation of U.S. decennial life tables, and in the estimation of U.S. annual life tables since 1997 (9). 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 (21). 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 (21). Further, the Medicare race and ethnicity classification system makes it impossible to correctly identify the Hispanic, American Indian or Alaska Native, or Asian or Pacific Islander populations (12,22). 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 (12). As a result, data from the Medicare program are used to supplement vital statistics and census data for ages 66–99 for the total population and for the white, black, non-Hispanic white, and non-Hispanic black populations (12).

To estimate death rates for the Medicare white, black, non-Hispanic white, and non-Hispanic black populations in 2015, age-specific numbers of deaths and population counts by sex and race for the population aged 66–99 from the 2017 and 2018 Medicare files were used. The data files are created by CMS for the Social Security Administration, which under a special agreement shares the files with NCHS. The 2017 file contains final Medicare population counts as of January 1, 2015 and the 2018 file contains final Medicare

population counts as of January 1, 2016, and final 2015 Medicare death counts. Medicare death data is reported on a calendar-year age basis, by subtracting the year of birth from the year of death. As a result, for a given reporting year, deaths reported as age x are on average exact age $x - 1/2$ as of January 1 of the reporting year. Medicare enrollment (population) data is reported on an age-at-last-birthday basis. As a result, persons with reported age x as of January 1 of the reporting year are on average exact age $x + 1/2$.

Preliminary adjustment of the data

Adjustment 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 following factor (F) is used to make the adjustment. F is calculated for the total and for each sex group within a racial and ethnic population 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 by the number of deaths in each age group. Table I 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 2015.

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 3% for total Hispanic deaths, a net underestimate of less than one-half percent for total non-Hispanic black deaths, and no under- or overestimate for total non-Hispanic white deaths or for the population racially classified as white or black, regardless of Hispanic origin (5). These results are based on a comparison of self-reported race and Hispanic origin on Current Population Surveys (CPS) with race and Hispanic origin reported on the death certificates of a sample of decedents in the National Longitudinal Mortality Study (NLMS) who died period 1999–2011 (5).

NLMS-linked records are used to estimate sex-age-specific ratios of CPS race and Hispanic-origin counts to death certificate counts (5,13,14). The CPS/death certificate ratio, or classification ratio, is the ratio of the weighted count of self-reported race and ethnicity on CPS to the weighted count of the same racial or 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 can be used as a correction factor for race and Hispanic origin misclassification (5,13,14). The assumption is made that the race and ethnicity reported by a CPS respondent is more reliable than proxy reporting of race and ethnicity by a funeral director who has little personal knowledge of the

Table I. Values for F used to adjust for not-stated age based on 2015 mortality data

Race, Hispanic origin, and sex	Total deaths	Total deaths for which age was not stated	F
Total	2,712,630	138	1.00005088
Male	1,373,404	95	1.00006918
Female	1,339,226	43	1.00003211
White	2,306,861	108	1.00004682
Male	1,164,176	71	1.00006099
Female	1,142,685	37	1.00003238
Black	320,072	26	1.00008124
Male	164,670	21	1.00012754
Female	155,402	5	1.00003218
Hispanic	179,457	6	1.00003344
Male	98,170	5	1.00005093
Female	81,287	1	1.00001230
Non-Hispanic white	2,123,631	57	1.00002684
Male	1,063,705	37	1.00003479
Female	1,059,926	20	1.00001887
Non-Hispanic black	315,254	17	1.00005393
Male	161,850	12	1.00007415
Female	153,404	5	1.00003259

SOURCE: NCHS, National Vital Statistics System, Mortality.

decedent. Further, public policy embodied in the 1997 OMB standard mandates that self-identification should be the standard used for the collection and recording of race and ethnicity information (17).

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

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

where ${}_nD_x^F$ is the age-specific number of deaths adjusted for unknown age as described above, ${}_nCR_x$ are the sex- and age-specific classification ratios used to correct for the misclassification of race and Hispanic origin on death certificates, and ${}_nD_x$ are the 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).

Because NLMS classification ratios for infant deaths are unreliable due to small sample sizes, corrections for racial and ethnic misclassification of infant deaths are addressed by using infant death counts and live birth counts from the 2014 and 2015 linked birth/infant death data files rather than the traditional birth and death data files (23,24). 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, race- and ethnicity-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

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

Age (years)	Hispanic			Non-Hispanic white			Non-Hispanic black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All ages	1.0329	1.0362	1.0294	0.9995	0.9993	0.9997	1.0047	1.0041	1.0053
0 ¹	1.0484	1.0412	1.0592	0.9837	0.9869	0.9820	1.0427	1.0477	1.0369
1–14	0.9905	0.9659	*1.0299	0.9918	1.0755	0.8770	1.0266	0.9379	*1.1751
15–24	0.9668	0.9325	1.0604	0.9976	1.0019	0.9869	1.0248	1.0215	1.0343
25–34	1.0354	1.0401	1.0232	1.0021	1.0034	0.9994	0.9855	0.9770	1.0008
35–44	1.0434	1.0645	1.0066	0.9980	0.9997	0.9951	1.0062	1.0073	1.0048
45–54	1.0584	1.0372	1.0953	0.9969	0.9965	0.9976	1.0002	1.0019	0.9982
55–64	1.0571	1.0517	1.0659	0.9994	0.9992	0.9997	1.0003	0.9965	1.0046
65–74	1.0295	1.0485	1.0072	0.9967	0.9967	0.9966	1.0062	1.0055	1.0070
75–84	1.0192	1.0188	1.0196	1.0004	1.0003	1.0004	1.0057	1.0057	1.0058
85–94	1.0208	1.0313	1.0137	1.0008	1.0007	1.0009	1.0110	1.0155	1.0086
95 and over	1.0732	1.0509	1.0842	1.0005	0.9995	1.0008	0.9980	0.9872	0.9954

* 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.
¹Ratios 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 2015 linked birth/infant death data file. Ratios are shown for illustrative purposes only; see text for details.
 SOURCE: NCHS, National Vital Statistics System, Mortality.

files overestimates the infant mortality rate by 4.8% for Hispanic and 4.3% for non-Hispanic black infants, and underestimates the rate by 2% for non-Hispanic white infants (see ratios for age 0 in Table II). Because the probability of death 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.

Note that although there is no conclusive evidence supporting return migration as a factor in the lower mortality of the Hispanic population, the possibility remains that Hispanic deaths are missed in NVSS due to return migration and, therefore, the resulting death rates may be biased regardless of correction for ethnic misclassification (12,25).

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 (1,8). Graduation techniques are often used to eliminate these anomalies and to derive a smooth curve by age. Beers ordinary minimized fifth difference formula is used to obtain smoothed values of population counts (P_x) and death counts (D_x) from 5-year age groupings of ${}_n P_x$ from age 0 to 99 and ${}_n D_x$ from age 5 to 99, and where ${}_n D_x$ has first been adjusted for not-reported age and race and Hispanic-origin misclassification on the death certificate (see reference 8 for details on the application of the Beers' method).

Calculation of the probability of dying (q_x)

The first step in the calculation of a complete period life table is the estimation of the age-specific probability of dying, q_x , which is derived from the age-specific death rate, m_x (3,25). In the life table cohort,

$$m_x = \frac{d_x}{L_x}$$

where d_x is the number of deaths occurring between ages x and $x + 1$, and L_x is the number of person-years lived by the life table cohort between ages x and $x + 1$. The conversion of the age-specific death rate, m_x , to the age-specific probability of death, q_x , is as follows:

$$q_x = \frac{m_x}{1 + (1 - a_x)m_x} \tag{3}$$

where a_x is the number of person-years lived in the age interval by members of the life table cohort who died in the interval. When the age interval is 1 year, except at infancy, $a_x = 1/2$; in other words, deaths occur on average midway through the age interval. As a result,

$$q_x = \frac{m_x}{1 + \frac{1}{2}m_x} \tag{4}$$

because the complete period life table is based on the age-specific death rates of a current population observed for a specific calendar year, the life table death rate is equivalent to the observed death rates of the current population:

$$m_x = \frac{d_x}{L_x} = M_x = \frac{D_x}{P_x}$$

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

$$q_x = \frac{M_x}{1 + \frac{1}{2}M_x} = \frac{D_x}{P_x + \frac{1}{2}D_x} \tag{5}$$

This procedure is used to estimate vital statistics age-specific probabilities of death for ages 1–99.

Calculation of q_x at age 0

The higher mortality observed in infancy is associated with a high concentration of deaths occurring at the beginning of the age interval rather than in the middle. As a result, whenever possible, it is best to assign deaths to the appropriate birth cohorts. Therefore, the probability of death at birth, q_0 , is 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 ($t - 1$). The value f is estimated by categorizing infant deaths by date of birth. The probability of death is then calculated as

$$q_0 = \frac{D_0(1-f)}{B^t} + \frac{D_0(f)}{B^{t-1}} \quad [6]$$

where D_0 is the number of infant deaths adjusted for not-stated age in 2015, B^t is the number of live births in 2015, and B^{t-1} is the number of live births in 2013. Table III shows separation factors and numbers of births for 2014–2015.

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

Medicare data are used to supplement vital statistics data for the estimation of q_x at the oldest ages, because these data are more accurate given that proof of age is required for enrollment in the Medicare program. Medicare data are used here to estimate the probability of dying at ages 66 and over for the total, white, black, non-Hispanic white, and non-Hispanic black populations.

The method described in this section consists of the following steps: First, vital statistics and Medicare death rates are blended in the age range 66–99. Second, a logistic model is used to smooth the blended death rates in the age range 85–99 and predict death rates for ages 100–120. Third, final resulting death rates, M_x , are converted to q_x .

For ages 66–94, vital statistics death rates, M_x^V , and Medicare death rates, M_x^M , are blended with a weighting process that gives gradually declining weight to vital statistics data and gradually increasing weight to Medicare data. For ages 95–99, M_x^M is used exclusively. Blended M_x is thus obtained as follows:

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

when $x = 66, \dots, 94$

$$\text{and } M_x = M_x^M$$

when $x = 95, \dots, 99$.

[7]

Because of the manner in which age is reported in Medicare death and enrollment data as of January 1 of the reporting year, Medicare death rates are in one-half years of age. As a result, M_x^M is estimated as follows:

$$M_x^M = \left[M_{x-\frac{1}{2}}^M + M_{x+\frac{1}{2}}^M \right] / 2$$

where $M_{x+\frac{1}{2}}^M = \frac{D_{y,x}}{[P_{y,x-1} + P_{y+1,x}]/2}$,

$$M_{x+\frac{1}{2}}^M = \frac{D_{y,x+1}}{[P_{y,x} + P_{y+1,x+1}]/2},$$

and $D_{y,x}$ is the number of Medicare deaths at age x , year y , where deaths occur on average to those age $x - 1/2$ as of January 1; $P_{y,x}$ is the Medicare population count with reported age $x - 1$ on January 1, year y ; and $P_{y+1,x}$ is the Medicare population count with reported age x on January 1, year $y + 1$.

A logistic model proposed by Kannisto is then used to smooth M_x in the age range 85–99 and predict M_x in the age range 100–120 (27). The start of the modeled age range varies by race- and ethnicity-specific population because it is a function of the age at which the rate of change in the age-specific death rates peak. In current times, the rate of change in the age-specific death rate rises steadily up to approximately ages 80–85 or so and then begins to decline. As a result, it is difficult to model a large age span, such as 65–100, with one simple model without over smoothing and, thus, altering the underlying mortality pattern observed in the population of interest (28). Further, the observed data for the age range 65–85 or so is reliable and robust, as indicated by the very close similarity between vital statistics and Medicare death rates, so it is unnecessary to model (smooth) the entire age span (65–100).

The Kannisto model is a simple form of a logistic model in which the logit of u_x (or the natural log of the odds of u_x) is a linear function of age, x (27). It is expressed as:

$$\ln \left[\frac{u_x}{1-u_x} \right] = \ln(\alpha) + \beta x \quad [8]$$

where u_x , the force of mortality (or the instantaneous death rate), is defined as:

$$u_x = \frac{\alpha e^{\beta x}}{1 + \alpha e^{\beta x}}$$

Because u_x is not directly observed but is closely approximated by m_x , and $m_x = M_x$, then the logit of M_x is modeled instead. A maximum-likelihood generalized linear model estimation procedure is used to fit the following model in the age range 85–99 years:

$$\ln \left[\frac{M_x}{1-M_x} \right] = \ln(\alpha) + \beta x \quad [9]$$

Then, the estimated parameters are used to predict \bar{M}_x as follows:

$$\bar{M}_x = \frac{e^a e^{bx}}{1 + e^a e^{bx}}, \text{ or equivalently, } \bar{M}_x = \frac{e^{a+bx}}{1 + e^{a+bx}} \quad [10]$$

where a and b are the predicted values of parameters $\ln(\alpha)$ and β , respectively, given by fitting model [9]. Estimated parameters and the starting age for the modeled age span by population in 2015 are presented in Table IV.

Finally, the predicted probability of death, \bar{q}_x , for ages 85–120 is estimated by converting \bar{M}_x as follows:

$$\bar{q}_x = \frac{\bar{M}_x}{1 + \frac{1}{2} \bar{M}_x} \quad [11]$$

Table III. Births in 2014 and 2015, deaths in 2015 of infants born in 2014 and 2015, and separation factors, by race, Hispanic origin, and sex: United States

Births, deaths, and separation factors	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:																		
2014	3,988,076	2,040,701	1,947,375	3,019,863	1,547,425	1,472,438	640,562	324,821	315,741	914,065	466,241	447,824	2,149,302	1,103,196	1,046,106	588,891	298,385	290,506
2015	3,978,497	2,036,161	1,942,336	3,012,855	1,543,326	1,469,529	640,079	325,262	314,817	924,048	471,456	452,592	2,130,279	1,092,789	1,037,490	589,047	299,319	289,728
Deaths in 2015 of infants born in:																		
2014	2,885	1,626	1,264	1,750	988	759	940	520	420	513	287	227	1,285	741	548	854	470	385
2015	20,570	11,382	9,183	13,084	7,246	5,841	6,349	3,513	2,836	4,070	2,231	1,838	9,159	5,096	4,059	5,770	3,172	2,597
Separation factor, <i>f</i>	0.123	0.125	0.121	0.118	0.120	0.115	0.129	0.129	0.129	0.112	0.114	0.110	0.123	0.127	0.119	0.129	0.129	0.129

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table IV. Estimated parameters α and β used for predicting m_x and starting age of modeled age span: United States Life Tables, 2015

Parameter	Total			White			Black			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
Starting age	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
$\ln(\alpha)$	-13.40414	-13.42275	-13.98819	-13.6521	-13.81786	-14.21282	-11.23444	-11.04278	-11.90725	-13.6097	-13.8066	-14.17418	-11.14658	-10.9329	-11.82584
(SE)	(0.081)	(0.106)	(0.078)	(0.051)	(0.059)	(0.052)	(0.091)	(0.223)	(0.081)	(0.049)	(0.062)	(0.05)	(0.087)	(0.079)	
β	0.1299291	0.1322083	0.1352772	0.1329055	0.1368396	0.1379764	0.1048415	0.1049589	0.1113392	0.1324688	0.1367534	0.137578	0.1039236	0.1038072	0.110488
(SE)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)

NOTE: SE is standard error.

SOURCE: NCHS, National Vital Statistics System, Mortality.

The probability of death is extrapolated to age 120 in order to estimate the life table population until no survivors remain. This information is then used to estimate L_x for ages 100–120, which is used to close the table with the age category 100 and over, combined (discussed below).

Probabilities of dying at the oldest ages for the Hispanic population

As noted above, Medicare data are unreliable for the Hispanic population due to 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. Beyond 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% and 89% from that of the non-Hispanic white population (13,14,25,29). The Brass relational logit model takes advantage of the relationship between Hispanic and non-Hispanic white mortality previously identified and has been widely and successfully used to predict the mortality of one population relative to another at the older ages (3,29–31). Using the age-specific mortality pattern of the non-Hispanic white population as the standard, the Brass 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 (3,30–32).

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:

$$\bar{Y}_x = \alpha + \beta Y_x^s \tag{12}$$

where \bar{Y}_x is the predicted logit of the probability of death, q_x , in the population of interest, that is

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

Y_x^s is the logit of the probability of death in the standard population, q_x^s , that is

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

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 (3,30–32). Table V shows values of predicted α and β and their standard errors.

Table V. Estimated Brass relational logit model parameters α and β for Hispanic-origin population, 2015

Parameter	Total (SE)	Male (SE)	Female (SE)
α	-0.2788933 (0.027)	-0.2518361 (0.035)	-0.2181547 (0.029)
β	1.00409 (0.007)	0.9998907 (0.010)	1.028227 (0.008)

NOTE: SE is standard error.

SOURCE: NCHS, National Vital Statistics System, Mortality.

A maximum-likelihood generalized linear model estimation procedure is used to fit equation [12] 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 76–120 in the Hispanic population. The value q_x was predicted to age 120 in order to estimate the life table population until no survivors remain, as was done for the other population groups. This information is then used to estimate L_x for ages 100–120, which is used to close the table with the age category 100 and over, combined (discussed below).

Predicted \bar{q}_x is estimated by transforming its logit, \bar{Y}_x , back as follows:

$$\bar{q}_x = \frac{\exp[\bar{Y}_x]}{1 + \exp[\bar{Y}_x]} = \frac{\exp[\alpha + \beta Y_x^s]}{1 + \exp[\alpha + \beta Y_x^s]} \tag{13}$$

To ensure a smooth transition from vital q_x^v and predicted \bar{q}_x , the two were blended from ages 76 to 80 with a graduating process as follows:

$$q_x = \frac{1}{6} [(81 - x) q_x^v + (x - 75) \bar{q}_x] \tag{14}$$

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

Finally, to close the table at age 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. After q_x is obtained for each single year of age, 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 follows:

$$l_x = l_{x-1} (1 - q_{x-1}) \tag{15}$$

Decrement function (d_x)

The number of deaths occurring between ages x and $x + 1$ is calculated from the survivor function as follows:

$$d_x = l_x - l_{x+1} = l_x q_x \tag{16}$$

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

Person-years lived (L_x)

Person-years lived for ages 1–99 is calculated assuming that the survivor function declines linearly between ages x and $x + 1$. This gives the formula:

$$L_x = \frac{1}{2} (l_x + l_{x+1}) = l_x - \frac{1}{2} d_x \quad [17]$$

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

$$L_0 = fl_0 + (1 - f)l_1 \quad [18]$$

Finally, ${}_{\infty}L_{100}$ is estimated as the sum of the extrapolated L_x values for ages 100–120.

Person-years lived at and above age x (T_x)

T_x is calculated by summing L_x values at and above age x :

$$T_x = \sum_{x=0}^{\infty} L_x \quad [19]$$

Life expectancy at age x (e_x)

Life expectancy at exact age x is calculated as:

$$e_x = \frac{T_x}{l_x} \quad [20]$$

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 years of age. 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 $x + n$ (where 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 of 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 and B 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 (${}_nq_x$, ${}_nd_x$, and ${}_nL_x$, respectively). 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 follows:

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

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

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

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 VI shows each of the life table functions for the 2015 U.S. total population abridged from Table 1.

Table VI. Life table for the total population: United States, 2015

Age (years)	Probability of dying between ages x and $x + n$	Number surviving to age x	Number dying between ages x and $x + n$	Person-years lived between ages x and $x + n$	Total number of person-years lived above age x	Expectation of life at age x
	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	e_x
0–1	0.005894	100,000	589	99,483	7,872,239	78.7
1–5	0.000994	99,411	99	397,404	7,772,756	78.2
5–10	0.000586	99,312	58	496,402	7,375,353	74.3
10–15	0.000729	99,254	72	496,125	6,878,951	69.3
15–20	0.002399	99,181	238	495,398	6,382,827	64.4
20–25	0.004451	98,943	440	493,671	5,887,429	59.5
25–30	0.005308	98,503	523	491,240	5,393,758	54.8
30–35	0.006356	97,980	623	488,385	4,902,519	50.0
35–40	0.007686	97,357	748	484,982	4,414,134	45.3
40–45	0.010251	96,609	990	480,702	3,929,152	40.7
45–50	0.015280	95,619	1,461	474,713	3,448,450	36.1
50–55	0.024324	94,158	2,290	465,433	2,973,738	31.6
55–60	0.036015	91,867	3,309	451,496	2,508,304	27.3
60–65	0.050851	88,559	4,503	432,063	2,056,808	23.2
65–70	0.071255	84,055	5,989	406,032	1,624,745	19.3
70–75	0.108972	78,066	8,507	370,238	1,218,713	15.6
75–80	0.168886	69,559	11,748	319,931	848,475	12.2
80–85	0.270188	57,811	15,620	251,436	528,545	9.1
85–90	0.424405	42,192	17,906	166,405	277,108	6.6
90–95	0.617361	24,285	14,993	81,430	110,704	4.6
95–100	0.791795	9,292	7,358	24,943	29,273	3.2
100 and over	1.000000	1,935	1,935	4,330	4,330	2.2

SOURCE: NCHS, National Vital Statistics System, Mortality.

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