

United States Life Tables, 2010

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Production errors in the previous version of the report have been corrected.

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 2010.

Methods—Data used to prepare the 2010 life tables are 2010 final mortality statistics; April 1, 2010 population estimates based on the 2010 decennial census; and 2010 Medicare data for persons aged 66-99. The methodology used to estimate the 2010 life tables was first implemented with data year 2008. 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.

Results—In 2010, the overall expectation of life at birth was 78.7 years. Between 2009 and 2010, life expectancy at birth increased for all groups considered. Life expectancy increased for both males (from 76.0 to 76.2) and females (80.9 to 81.0) and for the white population (78.8 to 78.9), the black population (74.7 to 75.1), the Hispanic population (81.1 to 81.4), the non-Hispanic white population (78.7 to 78.8), and the non-Hispanic black population (74.4 to 74.7).

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 2010 assumes a hypothetical cohort that is subject throughout its lifetime to the age-specific death rates prevailing for the actual population in 2010. 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, of course, can easily be aggregated into 5- or 10-year age groups (refer to the [Technical Notes](#) at the end of this report 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, race for the non-Hispanic population, and sex. The life tables by Hispanic origin are based on death rates that were adjusted for Hispanic origin misclassification (See [Technical Notes](#) for a detailed description of the methodology used to estimate Hispanic origin life tables).

Data and Methods

The data used to prepare the U.S. life tables for 2010 are final numbers of deaths for the year 2010, April 1, 2010 population estimates based on the 2010 decennial census, and age-specific death and population counts for Medicare beneficiaries aged 66-99 for the year 2010 from the Centers for Medicare & Medicaid Services (CMS). Data from the Medicare program are used to supplement vital statistics and census data for ages 66 and over. (See [Technical Notes](#) for a detailed description of the data sets used.)



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 2010 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 2010 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, 57,188 persons out of the original 2010 hypothetical life table cohort of 100,000 (or 57.2%) were alive at exact age 80. In other words, the probability that a person will survive from birth to age 80, given 2010 age-specific mortality, is 57.2%. Probabilities of survival can be calculated at any age by simply dividing the number of survivors at the terminal age by the number at the beginning age. For example, to calculate the probability of surviving from age 20 to age 85, one would divide the number of survivors at age 85 (41,497) by the number of survivors at age 20 (98,910), which results in a 42.0% probability of survival.

Explanation of the columns of the life table

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 0.001084 ([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, 99,445 will complete the first year of life and enter the second; 99,301 will reach age 10; 99,102 will reach age 20; and 48,344 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, 667 will die in the first year of life; 107 between ages 20 and 21; and 963 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 98,674 for males in the age interval 20-21 is the total number of years lived between the 20th and 21st birthdays by the 98,727 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 5,636,907 is the total number of years lived after attaining age 20 by the 98,727 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 57.1 years (5,636,907 divided by 98,727) ([Table 2](#)).

Results

Life expectancy in the United States

[Tables 1-18](#) show complete life tables for 2010 by race (white and black), Hispanic origin, race for the non-Hispanic population, and sex. [Table A](#) summarizes life expectancy by age, race, Hispanic origin, and sex. Life expectancy at birth for 2010 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 2010. In 2010, life expectancy at birth was 78.7 years, an increase of 0.2 years from 78.5 years in 2009 (Figures for 2009 used in this report are based on updated life tables using revised intercensal population estimates: http://www.cdc.gov/nchs/data/dvs/LEWK3_2009.pdf).

Changes in mortality levels by age and cause of death have a major effect on changes in life expectancy. Life expectancy at birth increased 0.2 years in 2010 from 2009 because of decreases in mortality from heart disease, Influenza and pneumonia, and cancer. Increases in life expectancy in 2010 from 2009 for the total population were slightly offset by increases in mortality from suicide, Alzheimer’s disease, and Chronic liver disease and cirrhosis. Decreases in mortality from heart disease, Influenza and pneumonia, and cancer generated an increase in life expectancy among the male population. This increase in life expectancy for males was offset somewhat by increase in mortality from suicide and Chronic liver disease and cirrhosis. Similarly, the increase in life expectancy for the female population was mainly brought about by decreases in mortality from heart disease, Influenza and pneumonia, and cancer. For females, however, the increase in life expectancy was offset slightly by increases in mortality from unintentional injuries and Alzheimer’s disease (5).

The difference in life expectancy between the sexes was 4.8 years in 2010, declining from 4.9 years in 2009. 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

Table A. Expectation of life by age, race, Hispanic origin, race for the non-Hispanic population, and sex: United States, 2010

Age	All races and origins			White			Black			Hispanic			Non-Hispanic white			Non-Hispanic black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0.....	78.7	76.2	81.0	78.9	76.5	81.3	75.1	71.8	78.0	81.4	78.7	83.8	78.8	76.4	81.1	74.7	71.4	77.7
1.....	78.1	75.7	80.5	78.4	76.0	80.7	75.0	71.8	77.8	80.8	78.2	83.2	78.2	75.8	80.5	74.6	71.3	77.5
5.....	74.2	71.8	76.6	74.4	72.1	76.7	71.1	67.9	73.9	76.9	74.2	79.3	74.3	71.9	76.6	70.7	67.5	73.6
10.....	69.3	66.8	71.6	69.5	67.1	71.8	66.1	62.9	69.0	71.9	69.3	74.3	69.3	67.0	71.6	65.8	62.5	68.7
15.....	64.3	61.9	66.6	64.5	62.1	66.8	61.2	58.0	64.0	67.0	64.3	69.4	64.4	62.0	66.6	60.8	57.6	63.7
20.....	59.5	57.1	61.7	59.7	57.3	61.9	56.4	53.3	59.1	62.1	59.5	64.4	59.5	57.2	61.7	56.0	52.9	58.8
25.....	54.7	52.4	56.9	54.9	52.7	57.0	51.7	48.8	54.3	57.3	54.8	59.5	54.7	52.5	56.9	51.4	48.4	54.0
30.....	50.0	47.8	52.0	50.1	48.0	52.2	47.1	44.3	49.5	52.5	50.0	54.6	50.0	47.9	52.0	46.7	43.9	49.2
35.....	45.2	43.1	47.2	45.4	43.3	47.4	42.4	39.7	44.7	47.7	45.3	49.7	45.3	43.2	47.2	42.1	39.4	44.5
40.....	40.5	38.5	42.4	40.7	38.7	42.6	37.8	35.2	40.1	42.9	40.6	44.9	40.6	38.6	42.5	37.6	34.9	39.8
45.....	35.9	33.9	37.7	36.0	34.1	37.9	33.4	30.8	35.5	38.2	36.0	40.1	36.0	34.0	37.8	33.1	30.5	35.3
50.....	31.4	29.6	33.2	31.6	29.7	33.3	29.1	26.6	31.1	33.6	31.4	35.4	31.5	29.7	33.2	28.8	26.3	31.0
55.....	27.2	25.4	28.8	27.3	25.5	28.8	25.1	22.7	27.0	29.2	27.1	30.8	27.2	25.5	28.8	24.9	22.5	26.8
60.....	23.1	21.5	24.4	23.1	21.6	24.5	21.3	19.2	23.0	24.9	23.0	26.4	23.1	21.5	24.4	21.2	19.0	22.9
65.....	19.1	17.7	20.3	19.2	17.8	20.3	17.8	15.9	19.3	20.8	19.1	22.1	19.1	17.7	20.3	17.7	15.8	19.1
70.....	15.5	14.2	16.5	15.5	14.2	16.4	14.6	12.9	15.8	16.9	15.4	18.0	15.4	14.2	16.4	14.5	12.8	15.7
75.....	12.1	11.0	12.9	12.1	11.0	12.8	11.6	10.2	12.5	13.4	12.0	14.2	12.0	11.0	12.8	11.6	10.1	12.5
80.....	9.1	8.2	9.7	9.0	8.2	9.6	9.0	7.8	9.6	10.1	9.0	10.8	9.0	8.1	9.6	8.9	7.8	9.6
85.....	6.5	5.8	6.9	6.5	5.8	6.9	6.8	5.9	7.1	7.4	6.4	7.8	6.5	5.8	6.9	6.7	5.9	7.1
90.....	4.6	4.1	4.8	4.5	4.0	4.8	5.0	4.4	5.2	5.2	4.5	5.4	4.5	4.0	4.8	5.0	4.4	5.2
95.....	3.2	2.9	3.3	3.2	2.8	3.3	3.7	3.3	3.8	3.6	3.2	3.7	3.2	2.8	3.3	3.8	3.3	3.8
100.....	2.3	2.1	2.3	2.3	2.0	2.3	2.8	2.5	2.8	2.6	2.3	2.6	2.3	2.0	2.3	2.8	2.5	2.8

SOURCE: CDC/NCHS, National Vital Statistics System.

Table B. Number of survivors by age, out of 100,000 born alive, by race, Hispanic origin, race for non-Hispanic population, and sex: United States, 2010

Age	All races and origins			White			Black			Hispanic			Non-Hispanic white			Non-Hispanic black		
	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.....	99,388	99,333	99,445	99,482	99,438	99,529	98,842	98,734	98,953	99,478	99,432	99,527	99,484	99,440	99,530	98,859	98,750	98,971
5.....	99,281	99,215	99,351	99,384	99,328	99,442	98,689	98,563	98,820	99,388	99,331	99,446	99,385	99,331	99,443	98,695	98,569	98,832
10.....	99,224	99,151	99,301	99,330	99,268	99,394	98,616	98,480	98,756	99,344	99,282	99,409	99,329	99,270	99,392	98,615	98,480	98,764
15.....	99,154	99,071	99,241	99,262	99,191	99,337	98,523	98,373	98,677	99,286	99,218	99,357	99,262	99,192	99,335	98,514	98,368	98,680
20.....	98,910	98,727	99,102	99,030	98,872	99,197	98,193	97,870	98,527	99,087	98,921	99,262	99,026	98,875	99,186	98,168	97,838	98,523
25.....	98,483	98,105	98,880	98,621	98,284	98,978	97,591	96,945	98,244	98,765	98,449	99,112	98,603	98,265	98,955	97,532	96,859	98,224
30.....	98,011	97,441	98,604	98,165	97,647	98,713	96,909	95,951	97,854	98,422	97,945	98,949	98,122	97,600	98,663	96,803	95,800	97,806
35.....	97,472	96,724	98,247	97,646	96,958	98,370	96,114	94,861	97,331	98,048	97,406	98,754	97,567	96,879	98,278	95,954	94,637	97,245
40.....	96,798	95,880	97,745	96,995	96,140	97,893	95,116	93,621	96,553	97,568	96,762	98,447	96,875	96,020	97,757	94,903	93,336	96,422
45.....	95,833	94,699	96,996	96,059	94,989	97,179	93,743	91,994	95,414	96,856	95,851	97,949	95,900	94,832	97,000	93,464	91,631	95,228
50.....	94,295	92,822	95,798	94,564	93,146	96,039	91,617	89,500	93,629	95,739	94,477	97,094	94,359	92,938	95,817	91,265	89,025	93,404
55.....	92,000	90,010	94,018	92,354	90,420	94,354	88,312	85,570	90,901	94,036	92,374	95,787	92,108	90,171	94,092	87,870	84,951	90,633
60.....	88,770	85,984	91,575	89,261	86,559	92,034	83,532	79,633	87,171	91,556	89,135	94,039	88,990	86,303	91,733	82,933	78,808	86,790
65.....	84,345	80,663	88,040	84,955	81,396	88,597	77,356	72,071	82,252	87,974	84,650	91,303	84,673	81,154	88,264	76,572	71,022	81,729
70.....	78,069	73,371	82,760	78,763	74,213	83,390	69,376	62,706	75,501	82,728	78,276	87,053	78,445	73,950	83,015	68,500	61,647	74,829
75.....	69,301	63,519	75,037	70,024	64,393	75,701	59,366	51,436	66,595	75,291	69,425	80,820	69,673	64,118	75,283	58,435	50,416	65,796
80.....	57,188	50,405	63,820	57,832	51,197	64,415	47,103	38,267	55,036	64,624	57,446	71,197	57,477	50,935	63,980	46,212	37,345	54,230
85.....	41,497	34,247	48,344	41,941	34,817	48,767	32,890	24,206	40,402	49,854	41,549	57,054	41,638	34,567	48,385	32,168	23,515	39,703
90.....	23,619	17,493	29,178	23,799	17,721	29,349	18,701	12,064	24,252	31,387	23,365	37,841	23,608	17,521	29,101	18,150	11,669	23,772
95.....	9,087	5,666	12,005	9,022	5,635	11,916	7,877	4,307	10,814	14,056	8,754	17,989	8,944	5,590	11,810	7,661	4,155	10,581
100.....	1,968	963	2,758	1,888	918	2,653	2,190	988	3,153	3,770	1,825	5,072	1,872	927	2,629	2,173	954	3,086

SOURCE: CDC/NCHS, National Vital Statistics System.

result of men's early and widespread adoption of cigarette smoking (6,7). Between 1979 and 2005, the difference in life expectancy between the sexes narrowed from 7.8 years to 5.0 years, increasing slightly to 5.1 years in 2006, and declining steadily to 4.8 years in 2010 (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 (6,7).

The 2010 life table may be used to compare life expectancy at any age from birth onward. On the basis of mortality experienced in 2010, a person aged 65 could expect to live an average of 19.1 more years for a total of 84.1 years; a person aged 85 could expect to live an additional 6.5 years for a total of 91.5 years; and a person aged 100 could expect to live an additional 2.3 years, on average (Table A).

Life expectancy by race

Between 2009 and 2010, life expectancy increased by 0.4 years to 75.1 years for the black population, and by 0.1 years to 78.9 years for the white population. The difference in life expectancy between the white and black populations was 3.8 years in 2010, 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 (7).

Among the four race-sex groups (Figure 1), white females continued to have the highest life expectancy at birth (81.3 years), followed by black females (78.0), white males (76.5), and black males (71.8). Between 2009 and 2010, life expectancy increased by 0.4 years for black males (from 71.4 to 71.8) and by 0.3 years for black females (from 77.7 to 78.0). Black males experienced a decline in life expectancy every year for 1984-1989 (12), followed by annual increases in 1990-1992, 1994-2004, and 2005-2010. Between 2009 and 2010, life expectancy increased by 0.1 years for white males (from 76.4 to 76.5) and for white females (from 81.2 to 81.3). Overall, gains in life expectancy between 1980 and 2010 were 8.0 years for black males, 5.8 years for white males, 5.5 years for black females, and 3.2 years for white females (Table 19).

Life expectancy by Hispanic origin

Between 2009 and 2010, life expectancy increased by 0.3 years for the non-Hispanic black population (from 74.4 to 74.7) and for the Hispanic population (from 81.1 to 81.4). It increased by 0.1 years for the non-Hispanic white population (from 78.7 to 78.8) (Table A). In 2010, the Hispanic population had a life expectancy advantage at birth of 2.6 years over the non-Hispanic white population and 6.7 years over the non-Hispanic black population.

Among the six Hispanic-origin race-sex groups (Figure 2), Hispanic females continued to have the highest life expectancy at birth (83.8 years), followed by non-Hispanic white females (81.1), Hispanic males (78.7), non-Hispanic black females (77.7), non-

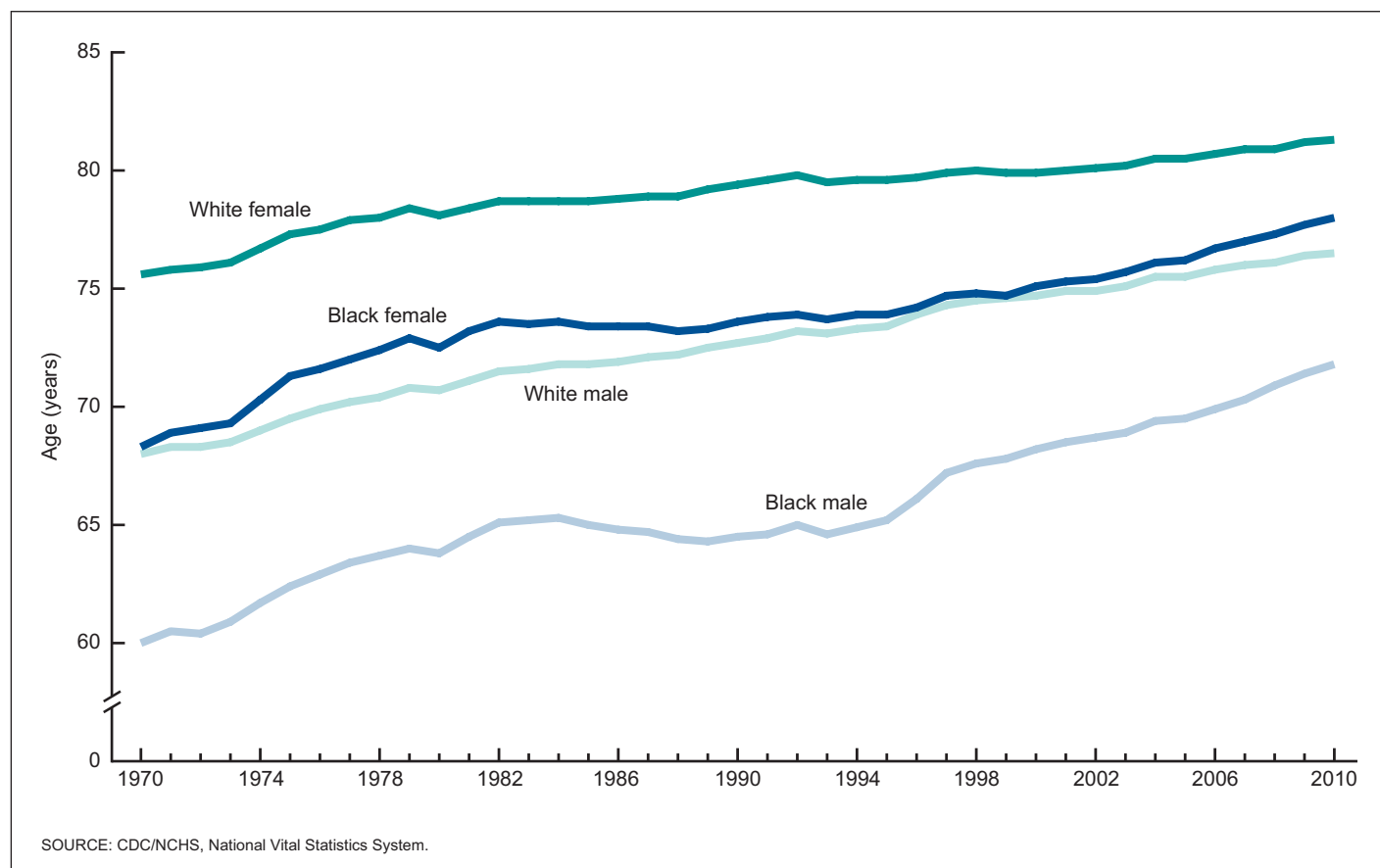


Figure 1. Life expectancy at birth by race and sex: 1970-2010

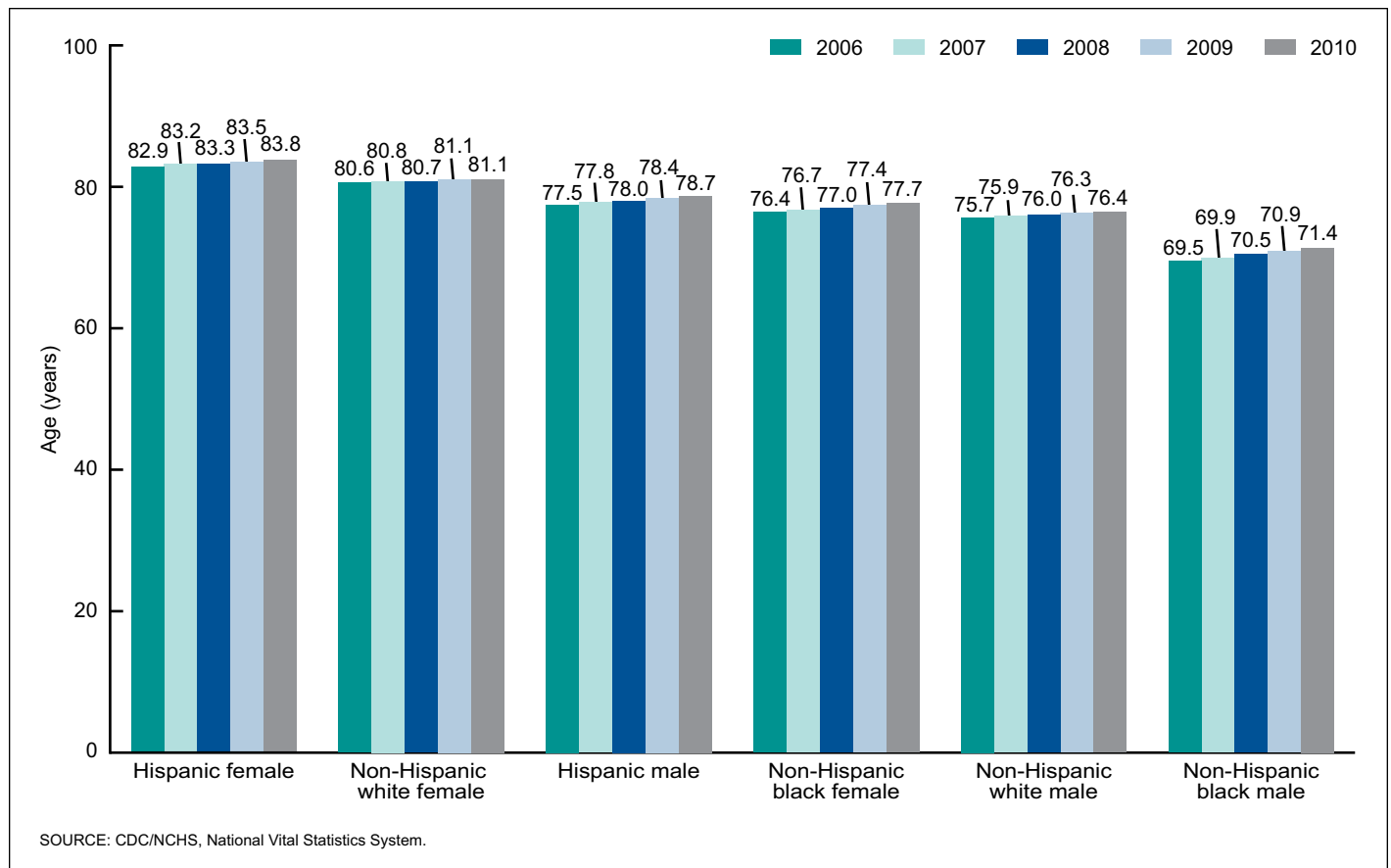


Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006-2010

Hispanic white males (76.4), and non-Hispanic black males (71.4). The smallest difference is between Hispanic and non-Hispanic white females, with Hispanic females having an advantage of 2.7 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 by race (white and black), irrespective of Hispanic origin. When the Hispanic population is excluded from the two race groups and only the non-Hispanic black and non-Hispanic white populations are included, life expectancy at birth declines. For example, for the black population, irrespective of Hispanic origin, life expectancy at birth was 75.1 years in 2010 but was 74.7 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 2010, but was 78.8 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 2010. [Table 20](#) shows trends in survivorship from 1900 to 2010. In 2010, 99.4% of all infants born in the United States survived the first year of life. In contrast, only 87.6% of infants born in 1900 survived the first year. Of the 2010 period life table cohort, 57.2% survived to age 80 and about 2.0% survived to age 100. In 1900, 13.5% of the life table cohort survived to age 80 and only 0.03% survived to age 100 ([Table 20](#)).

Survivorship by race

Among the four race-sex groups ([Table B](#)), white females have the highest median age at death with about 52.2% surviving to age 84. Of the original hypothetical cohort of 100,000 infant white females, 99.2% survive to age 20, 88.6% survive to age 65, and 48.8% survive to age 85. 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. At the older ages, however, black female survival surpasses white male survival. By age 85, white male survival is 34.8% compared with 40.4% for black females. The median age at death for black males is close to 76 years, about 9 years less than that for white females. Among black males, 97.9% survive to age 20, 72.1% to age 65, and 24.2% to age

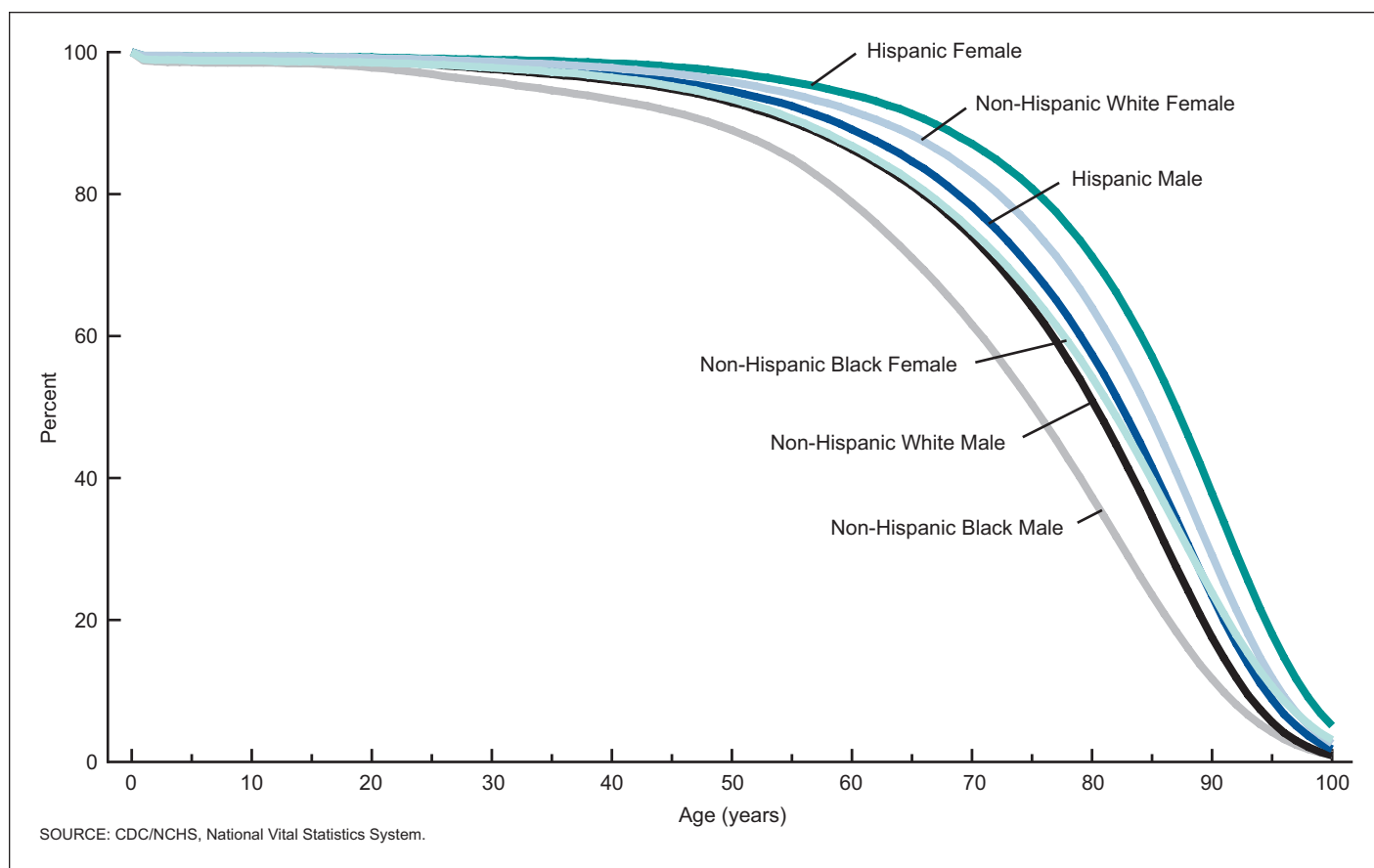


Figure 3. Percent surviving by Hispanic origin, race, age and sex: United States, 2010

85. By age 100, there is very little difference between the white and black populations in terms of survival. Slightly less than 1% of white and black males and around 3% of white and black females survive to age 100.

Survivorship by Hispanic origin

In 2010, 99.5% of Hispanic and non-Hispanic white infants survived the first year of life, compared with 98.9% of non-Hispanic black infants. Ninety-nine percent of both the Hispanic and non-Hispanic white populations survived to age 20, while 98.2% 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 84.7% of the non-Hispanic white and 76.6% of the non-Hispanic black populations. The Hispanic survival advantage increases with age so that by age 85 49.9% of the Hispanic population has survived, compared with 41.6% of the non-Hispanic white and 32.2% of the non-Hispanic black populations.

Among the six Hispanic-origin race-sex groups, Hispanic females have the highest median age at death, with 49.7% surviving to age 87 (Figure 3). The next group with the highest median age at death is non-Hispanic white females, with 51.9% surviving to age 84. Hispanic males had 51.2% surviving to age 82, followed by non-Hispanic black females with 51.5% surviving to age 81, non-Hispanic white males with 50.9% surviving to age 80, and finally non-Hispanic black males with 50.4% surviving to age 75 (see Technical Notes).

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Table 1. Life table for the total population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table01.xlsx.

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.006123	100,000	612	99,465	7,866,027	78.7
1-2	0.000428	99,388	43	99,366	7,766,561	78.1
2-3	0.000275	99,345	27	99,331	7,667,195	77.2
3-4	0.000211	99,318	21	99,307	7,567,864	76.2
4-5	0.000158	99,297	16	99,289	7,468,556	75.2
5-6	0.000145	99,281	14	99,274	7,369,267	74.2
6-7	0.000128	99,267	13	99,260	7,269,993	73.2
7-8	0.000114	99,254	11	99,249	7,170,733	72.2
8-9	0.000100	99,243	10	99,238	7,071,484	71.3
9-10	0.000087	99,233	9	99,229	6,972,246	70.3
10-11	0.000079	99,224	8	99,220	6,873,017	69.3
11-12	0.000086	99,216	9	99,212	6,773,797	68.3
12-13	0.000116	99,208	12	99,202	6,674,585	67.3
13-14	0.000175	99,196	17	99,188	6,575,383	66.3
14-15	0.000252	99,179	25	99,167	6,476,195	65.3
15-16	0.000333	99,154	33	99,138	6,377,028	64.3
16-17	0.000412	99,121	41	99,101	6,277,891	63.3
17-18	0.000492	99,080	49	99,056	6,178,790	62.4
18-19	0.000573	99,032	57	99,003	6,079,734	61.4
19-20	0.000655	98,975	65	98,942	5,980,731	60.4
20-21	0.000744	98,910	74	98,873	5,881,789	59.5
21-22	0.000829	98,836	82	98,795	5,782,916	58.5
22-23	0.000892	98,754	88	98,710	5,684,120	57.6
23-24	0.000925	98,666	91	98,621	5,585,410	56.6
24-25	0.000934	98,575	92	98,529	5,486,789	55.7
25-26	0.000936	98,483	92	98,437	5,388,260	54.7
26-27	0.000943	98,391	93	98,344	5,289,824	53.8
27-28	0.000953	98,298	94	98,251	5,191,479	52.8
28-29	0.000971	98,204	95	98,157	5,093,228	51.9
29-30	0.000998	98,109	98	98,060	4,995,071	50.9
30-31	0.001029	98,011	101	97,961	4,897,011	50.0
31-32	0.001063	97,910	104	97,858	4,799,051	49.0
32-33	0.001099	97,806	108	97,752	4,701,193	48.1
33-34	0.001137	97,699	111	97,643	4,603,440	47.1
34-35	0.001180	97,587	115	97,530	4,505,797	46.2
35-36	0.001235	97,472	120	97,412	4,408,267	45.2
36-37	0.001302	97,352	127	97,289	4,310,855	44.3
37-38	0.001377	97,225	134	97,158	4,213,567	43.3
38-39	0.001461	97,091	142	97,020	4,116,408	42.4
39-40	0.001557	96,949	151	96,874	4,019,388	41.5
40-41	0.001663	96,798	161	96,718	3,922,514	40.5
41-42	0.001793	96,637	173	96,551	3,825,796	39.6
42-43	0.001962	96,464	189	96,370	3,729,245	38.7
43-44	0.002177	96,275	210	96,170	3,632,875	37.7
44-45	0.002423	96,065	233	95,949	3,536,705	36.8
45-46	0.002676	95,833	256	95,704	3,440,756	35.9
46-47	0.002931	95,576	280	95,436	3,345,052	35.0
47-48	0.003205	95,296	305	95,143	3,249,616	34.1
48-49	0.003505	94,990	333	94,824	3,154,473	33.2
49-50	0.003830	94,658	363	94,476	3,059,649	32.3
50-51	0.004177	94,295	394	94,098	2,965,173	31.4
51-52	0.004535	93,901	426	93,688	2,871,075	30.6
52-53	0.004903	93,475	458	93,246	2,777,386	29.7
53-54	0.005284	93,017	491	92,771	2,684,140	28.9
54-55	0.005684	92,526	526	92,263	2,591,369	28.0
55-56	0.006117	92,000	563	91,718	2,499,106	27.2
56-57	0.006589	91,437	603	91,136	2,407,388	26.3
57-58	0.007095	90,834	644	90,512	2,316,253	25.5
58-59	0.007626	90,190	688	89,846	2,225,741	24.7
59-60	0.008180	89,502	732	89,136	2,135,895	23.9
60-61	0.008767	88,770	778	88,381	2,046,759	23.1
61-62	0.009397	87,992	827	87,578	1,958,378	22.3

Table 1. Life table for the total population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table01.xlsx.

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.010085	87,165	879	86,725	1,870,800	21.5
63-64	0.010863	86,286	937	85,817	1,784,075	20.7
64-65	0.011758	85,348	1,004	84,847	1,698,258	19.9
65-66	0.012810	84,345	1,080	83,805	1,613,411	19.1
66-67	0.014011	83,264	1,167	82,681	1,529,606	18.4
67-68	0.015290	82,098	1,255	81,470	1,446,925	17.6
68-69	0.016601	80,843	1,342	80,172	1,365,455	16.9
69-70	0.018005	79,501	1,431	78,785	1,285,283	16.2
70-71	0.019548	78,069	1,526	77,306	1,206,499	15.5
71-72	0.021294	76,543	1,630	75,728	1,129,192	14.8
72-73	0.023275	74,913	1,744	74,041	1,053,464	14.1
73-74	0.025528	73,169	1,868	72,236	979,423	13.4
74-75	0.028061	71,302	2,001	70,301	907,188	12.7
75-76	0.030820	69,301	2,136	68,233	836,886	12.1
76-77	0.033775	67,165	2,268	66,031	768,654	11.4
77-78	0.037252	64,896	2,418	63,688	702,623	10.8
78-79	0.041136	62,479	2,570	61,194	638,935	10.2
79-80	0.045411	59,909	2,721	58,549	577,741	9.6
80-81	0.050146	57,188	2,868	55,754	519,193	9.1
81-82	0.055445	54,321	3,012	52,815	463,438	8.5
82-83	0.061272	51,309	3,144	49,737	410,624	8.0
83-84	0.067764	48,165	3,264	46,533	360,887	7.5
84-85	0.075818	44,901	3,404	43,199	314,354	7.0
85-86	0.085319	41,497	3,540	39,727	271,155	6.5
86-87	0.094975	37,956	3,605	36,154	231,429	6.1
87-88	0.105525	34,351	3,625	32,539	195,275	5.7
88-89	0.117007	30,726	3,595	28,929	162,736	5.3
89-90	0.129450	27,131	3,512	25,375	133,807	4.9
90-91	0.142873	23,619	3,375	21,932	108,432	4.6
91-92	0.157280	20,245	3,184	18,653	86,500	4.3
92-93	0.172661	17,061	2,946	15,588	67,847	4.0
93-94	0.188988	14,115	2,668	12,781	52,259	3.7
94-95	0.206214	11,447	2,361	10,267	39,478	3.4
95-96	0.224274	9,087	2,038	8,068	29,211	3.2
96-97	0.243080	7,049	1,713	6,192	21,144	3.0
97-98	0.262527	5,335	1,401	4,635	14,951	2.8
98-99	0.282492	3,935	1,112	3,379	10,316	2.6
99-100	0.302838	2,823	855	2,396	6,937	2.5
100 and over	1.000000	1,968	1,968	4,542	4,542	2.3

Table 2. Life table for males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table02.xlsx.

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.006667	100,000	667	99,419	7,619,510	76.2
1-2	0.000449	99,333	45	99,311	7,520,090	75.7
2-3	0.000322	99,289	32	99,273	7,420,779	74.7
3-4	0.000247	99,257	25	99,245	7,321,507	73.8
4-5	0.000178	99,232	18	99,223	7,222,262	72.8
5-6	0.000166	99,215	17	99,206	7,123,039	71.8
6-7	0.000147	99,198	15	99,191	7,023,832	70.8
7-8	0.000129	99,183	13	99,177	6,924,642	69.8
8-9	0.000109	99,171	11	99,165	6,825,465	68.8
9-10	0.000087	99,160	9	99,156	6,726,299	67.8
10-11	0.000072	99,151	7	99,148	6,627,144	66.8
11-12	0.000078	99,144	8	99,140	6,527,996	65.8
12-13	0.000121	99,136	12	99,130	6,428,856	64.8
13-14	0.000209	99,124	21	99,114	6,329,726	63.9
14-15	0.000328	99,103	32	99,087	6,230,612	62.9
15-16	0.000451	99,071	45	99,049	6,131,525	61.9
16-17	0.000569	99,026	56	98,998	6,032,476	60.9
17-18	0.000690	98,970	68	98,936	5,933,478	60.0
18-19	0.000817	98,902	81	98,861	5,834,542	59.0
19-20	0.000945	98,821	93	98,774	5,735,681	58.0
20-21	0.001084	98,727	107	98,674	5,636,907	57.1
21-22	0.001216	98,620	120	98,560	5,538,233	56.2
22-23	0.001311	98,501	129	98,436	5,439,672	55.2
23-24	0.001354	98,371	133	98,305	5,341,237	54.3
24-25	0.001358	98,238	133	98,171	5,242,932	53.4
25-26	0.001348	98,105	132	98,039	5,144,760	52.4
26-27	0.001344	97,973	132	97,907	5,046,722	51.5
27-28	0.001345	97,841	132	97,775	4,948,815	50.6
28-29	0.001359	97,709	133	97,643	4,851,040	49.6
29-30	0.001384	97,576	135	97,509	4,753,397	48.7
30-31	0.001414	97,441	138	97,373	4,655,888	47.8
31-32	0.001444	97,304	140	97,233	4,558,516	46.8
32-33	0.001475	97,163	143	97,091	4,461,282	45.9
33-34	0.001506	97,020	146	96,947	4,364,191	45.0
34-35	0.001542	96,874	149	96,799	4,267,244	44.0
35-36	0.001592	96,724	154	96,647	4,170,445	43.1
36-37	0.001659	96,570	160	96,490	4,073,798	42.2
37-38	0.001738	96,410	168	96,326	3,977,307	41.3
38-39	0.001830	96,243	176	96,154	3,880,981	40.3
39-40	0.001941	96,066	186	95,973	3,784,827	39.4
40-41	0.002064	95,880	198	95,781	3,688,853	38.5
41-42	0.002217	95,682	212	95,576	3,593,072	37.6
42-43	0.002421	95,470	231	95,354	3,497,496	36.6
43-44	0.002684	95,239	256	95,111	3,402,142	35.7
44-45	0.002987	94,983	284	94,841	3,307,031	34.8
45-46	0.003303	94,699	313	94,543	3,212,190	33.9
46-47	0.003624	94,387	342	94,216	3,117,647	33.0
47-48	0.003968	94,045	373	93,858	3,023,431	32.1
48-49	0.004342	93,671	407	93,468	2,929,573	31.3
49-50	0.004746	93,265	443	93,043	2,836,105	30.4
50-51	0.005172	92,822	480	92,582	2,743,061	29.6
51-52	0.005617	92,342	519	92,083	2,650,479	28.7
52-53	0.006093	91,823	559	91,544	2,558,397	27.9
53-54	0.006611	91,264	603	90,962	2,466,853	27.0
54-55	0.007174	90,660	650	90,335	2,375,891	26.2
55-56	0.007792	90,010	701	89,659	2,285,556	25.4
56-57	0.008451	89,309	755	88,931	2,195,897	24.6
57-58	0.009121	88,554	808	88,150	2,106,965	23.8
58-59	0.009775	87,746	858	87,317	2,018,815	23.0
59-60	0.010415	86,889	905	86,436	1,931,498	22.2
60-61	0.011075	85,984	952	85,507	1,845,062	21.5
61-62	0.011791	85,031	1,003	84,530	1,759,554	20.7

Table 2. Life table for males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table02.xlsx.

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63.....	0.012577	84,029	1,057	83,500	1,675,024	19.9
63-64.....	0.013484	82,972	1,119	82,412	1,591,524	19.2
64-65.....	0.014542	81,853	1,190	81,258	1,509,111	18.4
65-66.....	0.015783	80,663	1,273	80,026	1,427,853	17.7
66-67.....	0.017195	79,390	1,365	78,707	1,347,827	17.0
67-68.....	0.018699	78,025	1,459	77,295	1,269,120	16.3
68-69.....	0.020247	76,566	1,550	75,790	1,191,825	15.6
69-70.....	0.021917	75,015	1,644	74,193	1,116,035	14.9
70-71.....	0.023725	73,371	1,741	72,501	1,041,841	14.2
71-72.....	0.025734	71,631	1,843	70,709	969,340	13.5
72-73.....	0.028077	69,787	1,959	68,808	898,631	12.9
73-74.....	0.030750	67,828	2,086	66,785	829,824	12.2
74-75.....	0.033815	65,742	2,223	64,631	763,039	11.6
75-76.....	0.037090	63,519	2,356	62,341	698,408	11.0
76-77.....	0.040540	61,163	2,480	59,923	636,067	10.4
77-78.....	0.044677	58,684	2,622	57,373	576,144	9.8
78-79.....	0.049227	56,062	2,760	54,682	518,771	9.3
79-80.....	0.054348	53,302	2,897	51,854	464,089	8.7
80-81.....	0.060110	50,405	3,030	48,890	412,236	8.2
81-82.....	0.066576	47,375	3,154	45,798	363,346	7.7
82-83.....	0.073449	44,221	3,248	42,597	317,547	7.2
83-84.....	0.080709	40,973	3,307	39,320	274,950	6.7
84-85.....	0.090777	37,666	3,419	35,957	235,630	6.3
85-86.....	0.101080	34,247	3,462	32,516	199,674	5.8
86-87.....	0.112324	30,785	3,458	29,056	167,157	5.4
87-88.....	0.124544	27,327	3,403	25,626	138,101	5.1
88-89.....	0.137762	23,924	3,296	22,276	112,475	4.7
89-90.....	0.151991	20,628	3,135	19,061	90,199	4.4
90-91.....	0.167224	17,493	2,925	16,030	71,139	4.1
91-92.....	0.183440	14,568	2,672	13,232	55,108	3.8
92-93.....	0.200596	11,895	2,386	10,702	41,877	3.5
93-94.....	0.218632	9,509	2,079	8,470	31,175	3.3
94-95.....	0.237462	7,430	1,764	6,548	22,705	3.1
95-96.....	0.256985	5,666	1,456	4,938	16,157	2.9
96-97.....	0.277076	4,210	1,166	3,627	11,219	2.7
97-98.....	0.297597	3,043	906	2,591	7,593	2.5
98-99.....	0.318395	2,138	681	1,797	5,002	2.3
99-100.....	0.339311	1,457	494	1,210	3,205	2.2
100 and over.....	1.000000	963	963	1,995	1,995	2.1

Table 3. Life table for females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table03.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005553	100,000	555	99,514	8,104,166	81.0
1-2	0.000407	99,445	41	99,424	8,004,653	80.5
2-3	0.000226	99,404	22	99,393	7,905,228	79.5
3-4	0.000172	99,382	17	99,373	7,805,835	78.5
4-5	0.000136	99,365	14	99,358	7,706,462	77.6
5-6	0.000123	99,351	12	99,345	7,607,104	76.6
6-7	0.000108	99,339	11	99,334	7,507,759	75.6
7-8	0.000097	99,328	10	99,323	7,408,425	74.6
8-9	0.000090	99,319	9	99,314	7,309,102	73.6
9-10	0.000086	99,310	9	99,305	7,209,788	72.6
10-11	0.000087	99,301	9	99,297	7,110,483	71.6
11-12	0.000094	99,292	9	99,288	7,011,186	70.6
12-13	0.000111	99,283	11	99,278	6,911,898	69.6
13-14	0.000138	99,272	14	99,265	6,812,621	68.6
14-15	0.000172	99,258	17	99,250	6,713,356	67.6
15-16	0.000209	99,241	21	99,231	6,614,106	66.6
16-17	0.000246	99,220	24	99,208	6,514,875	65.7
17-18	0.000282	99,196	28	99,182	6,415,667	64.7
18-19	0.000317	99,168	31	99,152	6,316,485	63.7
19-20	0.000351	99,137	35	99,119	6,217,332	62.7
20-21	0.000387	99,102	38	99,083	6,118,213	61.7
21-22	0.000424	99,064	42	99,042	6,019,130	60.8
22-23	0.000456	99,021	45	98,999	5,920,088	59.8
23-24	0.000479	98,976	47	98,953	5,821,089	58.8
24-25	0.000496	98,929	49	98,904	5,722,136	57.8
25-26	0.000513	98,880	51	98,854	5,623,232	56.9
26-27	0.000533	98,829	53	98,803	5,524,377	55.9
27-28	0.000555	98,776	55	98,749	5,425,575	54.9
28-29	0.000579	98,722	57	98,693	5,326,826	54.0
29-30	0.000608	98,664	60	98,634	5,228,133	53.0
30-31	0.000641	98,604	63	98,573	5,129,498	52.0
31-32	0.000679	98,541	67	98,508	5,030,925	51.1
32-33	0.000722	98,474	71	98,439	4,932,418	50.1
33-34	0.000768	98,403	76	98,365	4,833,979	49.1
34-35	0.000819	98,328	81	98,287	4,735,613	48.2
35-36	0.000880	98,247	86	98,204	4,637,326	47.2
36-37	0.000949	98,161	93	98,114	4,539,122	46.2
37-38	0.001021	98,068	100	98,018	4,441,008	45.3
38-39	0.001095	97,967	107	97,914	4,342,990	44.3
39-40	0.001177	97,860	115	97,803	4,245,077	43.4
40-41	0.001266	97,745	124	97,683	4,147,274	42.4
41-42	0.001371	97,621	134	97,554	4,049,591	41.5
42-43	0.001507	97,487	147	97,414	3,952,037	40.5
43-44	0.001676	97,340	163	97,259	3,854,623	39.6
44-45	0.001867	97,177	181	97,087	3,757,364	38.7
45-46	0.002060	96,996	200	96,896	3,660,278	37.7
46-47	0.002253	96,796	218	96,687	3,563,382	36.8
47-48	0.002462	96,578	238	96,459	3,466,695	35.9
48-49	0.002692	96,340	259	96,210	3,370,236	35.0
49-50	0.002941	96,081	283	95,940	3,274,025	34.1
50-51	0.003212	95,798	308	95,644	3,178,086	33.2
51-52	0.003489	95,491	333	95,324	3,082,441	32.3
52-53	0.003756	95,157	357	94,979	2,987,117	31.4
53-54	0.004009	94,800	380	94,610	2,892,139	30.5
54-55	0.004261	94,420	402	94,219	2,797,529	29.6
55-56	0.004527	94,018	426	93,805	2,703,310	28.8
56-57	0.004833	93,592	452	93,366	2,609,505	27.9
57-58	0.005191	93,140	483	92,898	2,516,140	27.0
58-59	0.005614	92,656	520	92,396	2,423,242	26.2
59-60	0.006092	92,136	561	91,855	2,330,846	25.3
60-61	0.006613	91,575	606	91,272	2,238,990	24.4
61-62	0.007169	90,969	652	90,643	2,147,719	23.6

Table 3. Life table for females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table03.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.007773	90,317	702	89,966	2,057,076	22.8
63-64	0.008444	89,615	757	89,237	1,967,110	22.0
64-65	0.009208	88,858	818	88,449	1,877,873	21.1
65-66	0.010110	88,040	890	87,595	1,789,424	20.3
66-67	0.011148	87,150	972	86,664	1,701,829	19.5
67-68	0.012250	86,178	1,056	85,650	1,615,165	18.7
68-69	0.013376	85,123	1,139	84,553	1,529,515	18.0
69-70	0.014569	83,984	1,224	83,372	1,444,961	17.2
70-71	0.015912	82,760	1,317	82,102	1,361,589	16.5
71-72	0.017467	81,444	1,423	80,732	1,279,487	15.7
72-73	0.019183	80,021	1,535	79,254	1,198,755	15.0
73-74	0.021138	78,486	1,659	77,657	1,119,501	14.3
74-75	0.023301	76,827	1,790	75,932	1,041,845	13.6
75-76	0.025719	75,037	1,930	74,072	965,913	12.9
76-77	0.028370	73,107	2,074	72,070	891,841	12.2
77-78	0.031447	71,033	2,234	69,916	819,771	11.5
78-79	0.034960	68,799	2,405	67,597	749,855	10.9
79-80	0.038765	66,394	2,574	65,107	682,258	10.3
80-81	0.042954	63,820	2,741	62,450	617,151	9.7
81-82	0.047669	61,079	2,912	59,623	554,702	9.1
82-83	0.053044	58,167	3,085	56,625	495,078	8.5
83-84	0.059332	55,082	3,268	53,448	438,454	8.0
84-85	0.066963	51,814	3,470	50,079	385,006	7.4
85-86	0.075561	48,344	3,653	46,518	334,927	6.9
86-87	0.084776	44,691	3,789	42,797	288,409	6.5
87-88	0.094934	40,903	3,883	38,961	245,613	6.0
88-89	0.106088	37,019	3,927	35,056	206,652	5.6
89-90	0.118281	33,092	3,914	31,135	171,596	5.2
90-91	0.131547	29,178	3,838	27,259	140,461	4.8
91-92	0.145904	25,340	3,697	23,491	113,202	4.5
92-93	0.161356	21,643	3,492	19,896	89,711	4.1
93-94	0.177886	18,150	3,229	16,536	69,814	3.8
94-95	0.195454	14,922	2,917	13,463	53,278	3.6
95-96	0.213997	12,005	2,569	10,721	39,815	3.3
96-97	0.233428	9,436	2,203	8,335	29,094	3.1
97-98	0.253635	7,233	1,835	6,316	20,759	2.9
98-99	0.274483	5,399	1,482	4,658	14,443	2.7
99-100	0.295817	3,917	1,159	3,338	9,785	2.5
100 and over	1.000000	2,758	2,758	6,448	6,448	2.3

Table 4. Life table for the white population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table04.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005177	100,000	518	99,548	7,894,144	78.9
1-2	0.000392	99,482	39	99,463	7,794,597	78.4
2-3	0.000250	99,443	25	99,431	7,695,134	77.4
3-4	0.000203	99,419	20	99,408	7,595,703	76.4
4-5	0.000147	99,398	15	99,391	7,496,295	75.4
5-6	0.000137	99,384	14	99,377	7,396,904	74.4
6-7	0.000121	99,370	12	99,364	7,297,527	73.4
7-8	0.000108	99,358	11	99,353	7,198,162	72.4
8-9	0.000096	99,347	10	99,343	7,098,810	71.5
9-10	0.000084	99,338	8	99,334	6,999,467	70.5
10-11	0.000077	99,330	8	99,326	6,900,133	69.5
11-12	0.000083	99,322	8	99,318	6,800,808	68.5
12-13	0.000111	99,314	11	99,308	6,701,490	67.5
13-14	0.000166	99,303	16	99,294	6,602,182	66.5
14-15	0.000239	99,286	24	99,274	6,502,887	65.5
15-16	0.000316	99,262	31	99,247	6,403,613	64.5
16-17	0.000390	99,231	39	99,212	6,304,366	63.5
17-18	0.000467	99,192	46	99,169	6,205,155	62.6
18-19	0.000546	99,146	54	99,119	6,105,986	61.6
19-20	0.000625	99,092	62	99,061	6,006,867	60.6
20-21	0.000710	99,030	70	98,995	5,907,806	59.7
21-22	0.000791	98,960	78	98,920	5,808,811	58.7
22-23	0.000852	98,881	84	98,839	5,709,891	57.7
23-24	0.000885	98,797	87	98,753	5,611,052	56.8
24-25	0.000896	98,710	88	98,665	5,512,299	55.8
25-26	0.000900	98,621	89	98,577	5,413,633	54.9
26-27	0.000909	98,532	90	98,488	5,315,057	53.9
27-28	0.000920	98,443	91	98,397	5,216,569	53.0
28-29	0.000938	98,352	92	98,306	5,118,172	52.0
29-30	0.000963	98,260	95	98,213	5,019,866	51.1
30-31	0.000992	98,165	97	98,117	4,921,653	50.1
31-32	0.001024	98,068	100	98,018	4,823,536	49.2
32-33	0.001058	97,968	104	97,916	4,725,519	48.2
33-34	0.001095	97,864	107	97,810	4,627,603	47.3
34-35	0.001135	97,757	111	97,701	4,529,793	46.3
35-36	0.001188	97,646	116	97,588	4,432,092	45.4
36-37	0.001254	97,530	122	97,469	4,334,504	44.4
37-38	0.001327	97,407	129	97,343	4,237,035	43.5
38-39	0.001408	97,278	137	97,210	4,139,692	42.6
39-40	0.001502	97,141	146	97,068	4,042,483	41.6
40-41	0.001605	96,995	156	96,917	3,945,414	40.7
41-42	0.001730	96,840	167	96,756	3,848,497	39.7
42-43	0.001896	96,672	183	96,581	3,751,741	38.8
43-44	0.002109	96,489	203	96,387	3,655,160	37.9
44-45	0.002352	96,285	226	96,172	3,558,773	37.0
45-46	0.002601	96,059	250	95,934	3,462,601	36.0
46-47	0.002850	95,809	273	95,673	3,366,667	35.1
47-48	0.003114	95,536	297	95,387	3,270,994	34.2
48-49	0.003397	95,239	323	95,077	3,175,607	33.3
49-50	0.003701	94,915	351	94,740	3,080,530	32.5
50-51	0.004026	94,564	381	94,374	2,985,791	31.6
51-52	0.004363	94,183	411	93,978	2,891,417	30.7
52-53	0.004708	93,772	441	93,552	2,797,439	29.8
53-54	0.005060	93,331	472	93,095	2,703,888	29.0
54-55	0.005431	92,859	504	92,606	2,610,793	28.1
55-56	0.005829	92,354	538	92,085	2,518,187	27.3
56-57	0.006268	91,816	576	91,528	2,426,102	26.4
57-58	0.006750	91,240	616	90,932	2,334,573	25.6
58-59	0.007274	90,625	659	90,295	2,243,641	24.8
59-60	0.007832	89,965	705	89,613	2,153,346	23.9
60-61	0.008425	89,261	752	88,885	2,063,733	23.1
61-62	0.009058	88,509	802	88,108	1,974,848	22.3

Table 4. Life table for the white population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table04.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.009749	87,707	855	87,279	1,886,740	21.5
63-64	0.010530	86,852	915	86,395	1,799,461	20.7
64-65	0.011428	85,937	982	85,446	1,713,067	19.9
65-66	0.012488	84,955	1,061	84,425	1,627,620	19.2
66-67	0.013696	83,894	1,149	83,320	1,543,196	18.4
67-68	0.014975	82,745	1,239	82,126	1,459,876	17.6
68-69	0.016276	81,506	1,327	80,843	1,377,750	16.9
69-70	0.017670	80,180	1,417	79,471	1,296,907	16.2
70-71	0.019215	78,763	1,513	78,006	1,217,436	15.5
71-72	0.020977	77,249	1,620	76,439	1,139,430	14.8
72-73	0.022973	75,629	1,737	74,760	1,062,991	14.1
73-74	0.025238	73,891	1,865	72,959	988,231	13.4
74-75	0.027806	72,027	2,003	71,025	915,272	12.7
75-76	0.030586	70,024	2,142	68,953	844,247	12.1
76-77	0.033566	67,882	2,279	66,743	775,294	11.4
77-78	0.037077	65,603	2,432	64,387	708,551	10.8
78-79	0.041024	63,171	2,592	61,875	644,164	10.2
79-80	0.045355	60,580	2,748	59,206	582,288	9.6
80-81	0.050059	57,832	2,895	56,384	523,083	9.0
81-82	0.055448	54,937	3,046	53,414	466,698	8.5
82-83	0.061377	51,891	3,185	50,298	413,284	8.0
83-84	0.067934	48,706	3,309	47,051	362,986	7.5
84-85	0.076126	45,397	3,456	43,669	315,934	7.0
85-86	0.085352	41,941	3,580	40,151	272,265	6.5
86-87	0.095222	38,361	3,653	36,535	232,114	6.1
87-88	0.106025	34,709	3,680	32,869	195,579	5.6
88-89	0.117801	31,029	3,655	29,201	162,711	5.2
89-90	0.130580	27,373	3,574	25,586	133,510	4.9
90-91	0.144381	23,799	3,436	22,081	107,923	4.5
91-92	0.159207	20,363	3,242	18,742	85,843	4.2
92-93	0.175045	17,121	2,997	15,622	67,101	3.9
93-94	0.191864	14,124	2,710	12,769	51,478	3.6
94-95	0.209609	11,414	2,393	10,218	38,709	3.4
95-96	0.228207	9,022	2,059	7,992	28,491	3.2
96-97	0.247561	6,963	1,724	6,101	20,499	2.9
97-98	0.267555	5,239	1,402	4,538	14,398	2.7
98-99	0.288053	3,837	1,105	3,285	9,860	2.6
99-100	0.308907	2,732	844	2,310	6,575	2.4
100 and over	1.000000	1,888	1,888	4,265	4,265	2.3

Table 5. Life table for white males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table05.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005622	100,000	562	99,509	7,654,399	76.5
1-2	0.000400	99,438	40	99,418	7,554,890	76.0
2-3	0.000294	99,398	29	99,383	7,455,472	75.0
3-4	0.000242	99,369	24	99,357	7,356,089	74.0
4-5	0.000168	99,345	17	99,336	7,256,732	73.0
5-6	0.000157	99,328	16	99,320	7,157,395	72.1
6-7	0.000138	99,313	14	99,306	7,058,075	71.1
7-8	0.000121	99,299	12	99,293	6,958,769	70.1
8-9	0.000103	99,287	10	99,282	6,859,477	69.1
9-10	0.000084	99,277	8	99,272	6,760,195	68.1
10-11	0.000073	99,268	7	99,265	6,660,923	67.1
11-12	0.000079	99,261	8	99,257	6,561,658	66.1
12-13	0.000119	99,253	12	99,247	6,462,401	65.1
13-14	0.000198	99,241	20	99,231	6,363,154	64.1
14-15	0.000305	99,222	30	99,206	6,263,922	63.1
15-16	0.000417	99,191	41	99,171	6,164,716	62.1
16-17	0.000525	99,150	52	99,124	6,065,545	61.2
17-18	0.000639	99,098	63	99,066	5,966,421	60.2
18-19	0.000760	99,035	75	98,997	5,867,355	59.2
19-20	0.000884	98,959	87	98,916	5,768,358	58.3
20-21	0.001017	98,872	101	98,822	5,669,443	57.3
21-22	0.001142	98,771	113	98,715	5,570,621	56.4
22-23	0.001234	98,658	122	98,598	5,471,906	55.5
23-24	0.001278	98,537	126	98,474	5,373,309	54.5
24-25	0.001287	98,411	127	98,347	5,274,835	53.6
25-26	0.001285	98,284	126	98,221	5,176,487	52.7
26-27	0.001287	98,158	126	98,095	5,078,267	51.7
27-28	0.001293	98,031	127	97,968	4,980,172	50.8
28-29	0.001307	97,905	128	97,841	4,882,204	49.9
29-30	0.001328	97,777	130	97,712	4,784,363	48.9
30-31	0.001355	97,647	132	97,581	4,686,651	48.0
31-32	0.001382	97,515	135	97,447	4,589,070	47.1
32-33	0.001412	97,380	137	97,311	4,491,623	46.1
33-34	0.001443	97,242	140	97,172	4,394,312	45.2
34-35	0.001480	97,102	144	97,030	4,297,140	44.3
35-36	0.001532	96,958	149	96,884	4,200,109	43.3
36-37	0.001601	96,810	155	96,732	4,103,225	42.4
37-38	0.001680	96,655	162	96,574	4,006,493	41.5
38-39	0.001772	96,492	171	96,407	3,909,919	40.5
39-40	0.001880	96,321	181	96,231	3,813,512	39.6
40-41	0.002000	96,140	192	96,044	3,717,281	38.7
41-42	0.002149	95,948	206	95,845	3,621,237	37.7
42-43	0.002351	95,742	225	95,629	3,525,392	36.8
43-44	0.002615	95,517	250	95,392	3,429,763	35.9
44-45	0.002920	95,267	278	95,128	3,334,371	35.0
45-46	0.003237	94,989	307	94,835	3,239,243	34.1
46-47	0.003555	94,681	337	94,513	3,144,408	33.2
47-48	0.003889	94,345	367	94,161	3,049,895	32.3
48-49	0.004245	93,978	399	93,778	2,955,734	31.5
49-50	0.004625	93,579	433	93,363	2,861,955	30.6
50-51	0.005026	93,146	468	92,912	2,768,593	29.7
51-52	0.005445	92,678	505	92,426	2,675,681	28.9
52-53	0.005890	92,173	543	91,902	2,583,255	28.0
53-54	0.006368	91,630	584	91,339	2,491,353	27.2
54-55	0.006885	91,047	627	90,733	2,400,015	26.4
55-56	0.007449	90,420	674	90,083	2,309,281	25.5
56-57	0.008054	89,746	723	89,385	2,219,198	24.7
57-58	0.008683	89,024	773	88,637	2,129,813	23.9
58-59	0.009315	88,251	822	87,840	2,041,176	23.1
59-60	0.009951	87,429	870	86,994	1,953,336	22.3
60-61	0.010610	86,559	918	86,099	1,866,342	21.6
61-62	0.011321	85,640	970	85,155	1,780,243	20.8

Table 5. Life table for white males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table05.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.012105	84,671	1,025	84,158	1,695,088	20.0
63-64	0.013010	83,646	1,088	83,102	1,610,929	19.3
64-65	0.014070	82,558	1,162	81,977	1,527,828	18.5
65-66	0.015319	81,396	1,247	80,772	1,445,851	17.8
66-67	0.016737	80,149	1,341	79,478	1,365,079	17.0
67-68	0.018245	78,808	1,438	78,089	1,285,600	16.3
68-69	0.019783	77,370	1,531	76,604	1,207,512	15.6
69-70	0.021441	75,839	1,626	75,026	1,130,907	14.9
70-71	0.023256	74,213	1,726	73,350	1,055,881	14.2
71-72	0.025281	72,487	1,833	71,571	982,531	13.6
72-73	0.027638	70,655	1,953	69,678	910,960	12.9
73-74	0.030323	68,702	2,083	67,660	841,282	12.2
74-75	0.033404	66,619	2,225	65,506	773,622	11.6
75-76	0.036673	64,393	2,361	63,213	708,116	11.0
76-77	0.040126	62,032	2,489	60,787	644,903	10.4
77-78	0.044287	59,543	2,637	58,224	584,116	9.8
78-79	0.048898	56,906	2,783	55,514	525,891	9.2
79-80	0.054068	54,123	2,926	52,660	470,377	8.7
80-81	0.059822	51,197	3,063	49,666	417,717	8.2
81-82	0.066422	48,134	3,197	46,536	368,051	7.6
82-83	0.073375	44,937	3,297	43,288	321,516	7.2
83-84	0.080644	41,640	3,358	39,961	278,227	6.7
84-85	0.090515	38,282	3,465	36,549	238,267	6.2
85-86	0.101047	34,817	3,518	33,058	201,717	5.8
86-87	0.112565	31,299	3,523	29,537	168,660	5.4
87-88	0.125106	27,775	3,475	26,038	139,123	5.0
88-89	0.138695	24,301	3,370	22,615	113,085	4.7
89-90	0.153341	20,930	3,209	19,325	90,469	4.3
90-91	0.169039	17,721	2,995	16,223	71,144	4.0
91-92	0.185762	14,725	2,735	13,358	54,921	3.7
92-93	0.203464	11,990	2,440	10,770	41,563	3.5
93-94	0.222073	9,550	2,121	8,490	30,793	3.2
94-95	0.241497	7,429	1,794	6,532	22,303	3.0
95-96	0.261620	5,635	1,474	4,898	15,771	2.8
96-97	0.282307	4,161	1,175	3,574	10,873	2.6
97-98	0.303404	2,986	906	2,533	7,299	2.4
98-99	0.324745	2,080	676	1,742	4,766	2.3
99-100	0.346158	1,405	486	1,162	3,024	2.2
100 and over	1.000000	918	918	1,862	1,862	2.0

Table 6. Life table for white females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table06.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.004710	100,000	471	99,588	8,128,871	81.3
1-2	0.000383	99,529	38	99,510	8,029,283	80.7
2-3	0.000204	99,491	20	99,481	7,929,773	79.7
3-4	0.000162	99,471	16	99,463	7,830,292	78.7
4-5	0.000125	99,455	12	99,448	7,730,830	77.7
5-6	0.000116	99,442	12	99,436	7,631,381	76.7
6-7	0.000104	99,431	10	99,426	7,531,945	75.8
7-8	0.000095	99,420	9	99,416	7,432,519	74.8
8-9	0.000088	99,411	9	99,407	7,333,104	73.8
9-10	0.000083	99,402	8	99,398	7,233,697	72.8
10-11	0.000082	99,394	8	99,390	7,134,299	71.8
11-12	0.000087	99,386	9	99,382	7,034,909	70.8
12-13	0.000103	99,377	10	99,372	6,935,528	69.8
13-14	0.000132	99,367	13	99,360	6,836,156	68.8
14-15	0.000169	99,354	17	99,345	6,736,795	67.8
15-16	0.000209	99,337	21	99,327	6,637,450	66.8
16-17	0.000248	99,316	25	99,304	6,538,123	65.8
17-18	0.000285	99,292	28	99,277	6,438,819	64.8
18-19	0.000320	99,263	32	99,247	6,339,542	63.9
19-20	0.000352	99,232	35	99,214	6,240,294	62.9
20-21	0.000386	99,197	38	99,178	6,141,080	61.9
21-22	0.000420	99,158	42	99,138	6,041,902	60.9
22-23	0.000449	99,117	45	99,094	5,942,765	60.0
23-24	0.000469	99,072	47	99,049	5,843,670	59.0
24-25	0.000484	99,026	48	99,002	5,744,621	58.0
25-26	0.000498	98,978	49	98,953	5,645,620	57.0
26-27	0.000514	98,929	51	98,903	5,546,667	56.1
27-28	0.000532	98,878	53	98,851	5,447,763	55.1
28-29	0.000555	98,825	55	98,798	5,348,912	54.1
29-30	0.000583	98,770	58	98,741	5,250,114	53.2
30-31	0.000615	98,713	61	98,682	5,151,373	52.2
31-32	0.000652	98,652	64	98,620	5,052,691	51.2
32-33	0.000693	98,588	68	98,553	4,954,071	50.3
33-34	0.000735	98,519	72	98,483	4,855,518	49.3
34-35	0.000781	98,447	77	98,408	4,757,035	48.3
35-36	0.000836	98,370	82	98,329	4,658,626	47.4
36-37	0.000900	98,288	88	98,244	4,560,297	46.4
37-38	0.000967	98,199	95	98,152	4,462,054	45.4
38-39	0.001038	98,104	102	98,053	4,363,902	44.5
39-40	0.001117	98,002	109	97,948	4,265,849	43.5
40-41	0.001202	97,893	118	97,834	4,167,901	42.6
41-42	0.001303	97,775	127	97,712	4,070,067	41.6
42-43	0.001433	97,648	140	97,578	3,972,355	40.7
43-44	0.001595	97,508	156	97,430	3,874,777	39.7
44-45	0.001778	97,353	173	97,266	3,777,347	38.8
45-46	0.001963	97,179	191	97,084	3,680,081	37.9
46-47	0.002147	96,989	208	96,885	3,582,997	36.9
47-48	0.002342	96,780	227	96,667	3,486,112	36.0
48-49	0.002555	96,554	247	96,430	3,389,445	35.1
49-50	0.002785	96,307	268	96,173	3,293,015	34.2
50-51	0.003037	96,039	292	95,893	3,196,842	33.3
51-52	0.003295	95,747	316	95,589	3,100,949	32.4
52-53	0.003545	95,432	338	95,263	3,005,359	31.5
53-54	0.003779	95,093	359	94,914	2,910,097	30.6
54-55	0.004012	94,734	380	94,544	2,815,183	29.7
55-56	0.004259	94,354	402	94,153	2,720,639	28.8
56-57	0.004546	93,952	427	93,739	2,626,486	28.0
57-58	0.004895	93,525	458	93,296	2,532,747	27.1
58-59	0.005321	93,067	495	92,820	2,439,451	26.2
59-60	0.005810	92,572	538	92,303	2,346,632	25.3
60-61	0.006343	92,034	584	91,742	2,254,329	24.5
61-62	0.006907	91,450	632	91,135	2,162,586	23.6

Table 6. Life table for white females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table06.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.007518	90,819	683	90,477	2,071,452	22.8
63-64	0.008193	90,136	739	89,767	1,980,974	22.0
64-65	0.008958	89,397	801	88,997	1,891,208	21.2
65-66	0.009865	88,597	874	88,160	1,802,211	20.3
66-67	0.010908	87,723	957	87,244	1,714,051	19.5
67-68	0.012006	86,766	1,042	86,245	1,626,807	18.7
68-69	0.013118	85,724	1,125	85,162	1,540,562	18.0
69-70	0.014301	84,599	1,210	83,994	1,455,401	17.2
70-71	0.015637	83,390	1,304	82,738	1,371,406	16.4
71-72	0.017207	82,086	1,412	81,379	1,288,669	15.7
72-73	0.018934	80,673	1,527	79,909	1,207,289	15.0
73-74	0.020896	79,146	1,654	78,319	1,127,380	14.2
74-75	0.023104	77,492	1,790	76,597	1,049,061	13.5
75-76	0.025556	75,701	1,935	74,734	972,465	12.8
76-77	0.028238	73,767	2,083	72,725	897,730	12.2
77-78	0.031343	71,684	2,247	70,560	825,005	11.5
78-79	0.034911	69,437	2,424	68,225	754,445	10.9
79-80	0.038764	67,013	2,598	65,714	686,220	10.2
80-81	0.042890	64,415	2,763	63,034	620,506	9.6
81-82	0.047653	61,652	2,938	60,183	557,472	9.0
82-83	0.053141	58,715	3,120	57,154	497,288	8.5
83-84	0.059534	55,594	3,310	53,939	440,134	7.9
84-85	0.067280	52,285	3,518	50,526	386,195	7.4
85-86	0.075631	48,767	3,688	46,923	335,669	6.9
86-87	0.085029	45,079	3,833	43,162	288,746	6.4
87-88	0.095406	41,246	3,935	39,278	245,584	6.0
88-89	0.106818	37,311	3,985	35,318	206,306	5.5
89-90	0.119309	33,325	3,976	31,337	170,988	5.1
90-91	0.132914	29,349	3,901	27,399	139,651	4.8
91-92	0.147652	25,448	3,757	23,569	112,252	4.4
92-93	0.163524	21,691	3,547	19,917	88,683	4.1
93-94	0.180509	18,144	3,275	16,506	68,765	3.8
94-95	0.198561	14,869	2,952	13,392	52,259	3.5
95-96	0.217611	11,916	2,593	10,620	38,867	3.3
96-97	0.237561	9,323	2,215	8,216	28,247	3.0
97-98	0.258287	7,108	1,836	6,190	20,031	2.8
98-99	0.279644	5,272	1,474	4,535	13,841	2.6
99-100	0.301463	3,798	1,145	3,226	9,306	2.5
100 and over	1.000000	2,653	2,653	6,080	6,080	2.3

Table 7. Life table for the black population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table07.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.011582	100,000	1,158	98,989	7,508,138	75.1
1-2	0.000638	98,842	63	98,810	7,409,149	75.0
2-3	0.000418	98,779	41	98,758	7,310,339	74.0
3-4	0.000269	98,737	27	98,724	7,211,581	73.0
4-5	0.000217	98,711	21	98,700	7,112,856	72.1
5-6	0.000196	98,689	19	98,680	7,014,156	71.1
6-7	0.000169	98,670	17	98,662	6,915,476	70.1
7-8	0.000148	98,653	15	98,646	6,816,815	69.1
8-9	0.000128	98,639	13	98,633	6,718,169	68.1
9-10	0.000109	98,626	11	98,621	6,619,536	67.1
10-11	0.000098	98,616	10	98,611	6,520,915	66.1
11-12	0.000108	98,606	11	98,600	6,422,304	65.1
12-13	0.000153	98,595	15	98,588	6,323,704	64.1
13-14	0.000237	98,580	23	98,568	6,225,116	63.1
14-15	0.000346	98,557	34	98,540	6,126,548	62.2
15-16	0.000456	98,523	45	98,500	6,028,009	61.2
16-17	0.000560	98,478	55	98,450	5,929,509	60.2
17-18	0.000665	98,422	65	98,390	5,831,059	59.2
18-19	0.000776	98,357	76	98,319	5,732,669	58.3
19-20	0.000895	98,281	88	98,237	5,634,350	57.3
20-21	0.001030	98,193	101	98,142	5,536,113	56.4
21-22	0.001165	98,092	114	98,035	5,437,971	55.4
22-23	0.001271	97,977	125	97,915	5,339,936	54.5
23-24	0.001328	97,853	130	97,788	5,242,021	53.6
24-25	0.001347	97,723	132	97,657	5,144,233	52.6
25-26	0.001353	97,591	132	97,525	5,046,576	51.7
26-27	0.001369	97,459	133	97,392	4,949,051	50.8
27-28	0.001391	97,326	135	97,258	4,851,659	49.8
28-29	0.001427	97,190	139	97,121	4,754,401	48.9
29-30	0.001475	97,052	143	96,980	4,657,279	48.0
30-31	0.001528	96,909	148	96,835	4,560,299	47.1
31-32	0.001581	96,761	153	96,684	4,463,465	46.1
32-33	0.001639	96,608	158	96,528	4,366,781	45.2
33-34	0.001704	96,449	164	96,367	4,270,252	44.3
34-35	0.001776	96,285	171	96,199	4,173,885	43.3
35-36	0.001865	96,114	179	96,024	4,077,686	42.4
36-37	0.001969	95,935	189	95,840	3,981,661	41.5
37-38	0.002079	95,746	199	95,646	3,885,821	40.6
38-39	0.002193	95,547	209	95,442	3,790,175	39.7
39-40	0.002319	95,337	221	95,227	3,694,733	38.8
40-41	0.002461	95,116	234	94,999	3,599,506	37.8
41-42	0.002634	94,882	250	94,757	3,504,507	36.9
42-43	0.002855	94,632	270	94,497	3,409,750	36.0
43-44	0.003130	94,362	295	94,214	3,315,253	35.1
44-45	0.003446	94,067	324	93,905	3,221,039	34.2
45-46	0.003770	93,743	353	93,566	3,127,134	33.4
46-47	0.004109	93,389	384	93,197	3,033,568	32.5
47-48	0.004506	93,005	419	92,796	2,940,371	31.6
48-49	0.004979	92,586	461	92,356	2,847,575	30.8
49-50	0.005516	92,125	508	91,871	2,755,219	29.9
50-51	0.006086	91,617	558	91,338	2,663,348	29.1
51-52	0.006666	91,060	607	90,756	2,572,010	28.2
52-53	0.007279	90,453	658	90,123	2,481,254	27.4
53-54	0.007936	89,794	713	89,438	2,391,130	26.6
54-55	0.008644	89,082	770	88,697	2,301,693	25.8
55-56	0.009431	88,312	833	87,895	2,212,996	25.1
56-57	0.010273	87,479	899	87,029	2,125,101	24.3
57-58	0.011109	86,580	962	86,099	2,038,071	23.5
58-59	0.011890	85,618	1,018	85,109	1,951,972	22.8
59-60	0.012629	84,600	1,068	84,066	1,866,863	22.1
60-61	0.013398	83,532	1,119	82,972	1,782,797	21.3
61-62	0.014249	82,413	1,174	81,825	1,699,825	20.6

Table 7. Life table for the black population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table07.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.015158	81,238	1,231	80,623	1,617,999	19.9
63-64	0.016154	80,007	1,292	79,361	1,537,377	19.2
64-65	0.017263	78,715	1,359	78,035	1,458,016	18.5
65-66	0.018514	77,356	1,432	76,640	1,379,981	17.8
66-67	0.019936	75,924	1,514	75,167	1,303,341	17.2
67-68	0.021463	74,410	1,597	73,611	1,228,175	16.5
68-69	0.023055	72,813	1,679	71,974	1,154,563	15.9
69-70	0.024717	71,134	1,758	70,255	1,082,590	15.2
70-71	0.026444	69,376	1,835	68,459	1,012,335	14.6
71-72	0.028268	67,541	1,909	66,587	943,876	14.0
72-73	0.030413	65,632	1,996	64,634	877,289	13.4
73-74	0.032895	63,636	2,093	62,589	812,655	12.8
74-75	0.035375	61,543	2,177	60,454	750,066	12.2
75-76	0.038241	59,366	2,270	58,231	689,612	11.6
76-77	0.041466	57,095	2,368	55,912	631,381	11.1
77-78	0.044873	54,728	2,456	53,500	575,469	10.5
78-79	0.048519	52,272	2,536	51,004	521,969	10.0
79-80	0.052931	49,736	2,633	48,420	470,965	9.5
80-81	0.058364	47,103	2,749	45,729	422,546	9.0
81-82	0.063221	44,354	2,804	42,952	376,817	8.5
82-83	0.068189	41,550	2,833	40,134	333,864	8.0
83-84	0.074463	38,717	2,883	37,275	293,731	7.6
84-85	0.082165	35,834	2,944	34,362	256,456	7.2
85-86	0.089575	32,890	2,946	31,417	222,094	6.8
86-87	0.097542	29,944	2,921	28,483	190,677	6.4
87-88	0.106087	27,023	2,867	25,589	162,194	6.0
88-89	0.115229	24,156	2,783	22,764	136,605	5.7
89-90	0.124984	21,373	2,671	20,037	113,840	5.3
90-91	0.135361	18,701	2,531	17,436	93,803	5.0
91-92	0.146368	16,170	2,367	14,987	76,368	4.7
92-93	0.158003	13,803	2,181	12,713	61,381	4.4
93-94	0.170260	11,622	1,979	10,633	48,669	4.2
94-95	0.183126	9,643	1,766	8,760	38,036	3.9
95-96	0.196579	7,877	1,549	7,103	29,275	3.7
96-97	0.210590	6,329	1,333	5,662	22,172	3.5
97-98	0.225122	4,996	1,125	4,434	16,510	3.3
98-99	0.240128	3,871	930	3,407	12,076	3.1
99-100	0.255555	2,942	752	2,566	8,669	2.9
100 and over	1.000000	2,190	2,190	6,104	6,104	2.8

Table 8. Life table for black males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table08.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.012655	100,000	1,266	98,904	7,184,652	71.8
1-2	0.000679	98,734	67	98,701	7,085,748	71.8
2-3	0.000494	98,668	49	98,643	6,987,047	70.8
3-4	0.000314	98,619	31	98,603	6,888,404	69.8
4-5	0.000250	98,588	25	98,575	6,789,800	68.9
5-6	0.000226	98,563	22	98,552	6,691,225	67.9
6-7	0.000199	98,541	20	98,531	6,592,673	66.9
7-8	0.000174	98,521	17	98,513	6,494,142	65.9
8-9	0.000142	98,504	14	98,497	6,395,629	64.9
9-10	0.000104	98,490	10	98,485	6,297,132	63.9
10-11	0.000076	98,480	7	98,476	6,198,647	62.9
11-12	0.000082	98,472	8	98,468	6,100,171	61.9
12-13	0.000151	98,464	15	98,457	6,001,702	61.0
13-14	0.000294	98,449	29	98,435	5,903,246	60.0
14-15	0.000483	98,420	48	98,397	5,804,811	59.0
15-16	0.000674	98,373	66	98,340	5,706,414	58.0
16-17	0.000848	98,307	83	98,265	5,608,074	57.0
17-18	0.001021	98,223	100	98,173	5,509,809	56.1
18-19	0.001198	98,123	118	98,064	5,411,636	55.2
19-20	0.001384	98,005	136	97,938	5,313,572	54.2
20-21	0.001596	97,870	156	97,792	5,215,634	53.3
21-22	0.001810	97,714	177	97,625	5,117,843	52.4
22-23	0.001973	97,537	192	97,441	5,020,217	51.5
23-24	0.002050	97,344	200	97,245	4,922,777	50.6
24-25	0.002057	97,145	200	97,045	4,825,532	49.7
25-26	0.002038	96,945	198	96,846	4,728,487	48.8
26-27	0.002031	96,747	196	96,649	4,631,641	47.9
27-28	0.002035	96,551	196	96,453	4,534,992	47.0
28-29	0.002068	96,354	199	96,255	4,438,540	46.1
29-30	0.002123	96,155	204	96,053	4,342,285	45.2
30-31	0.002184	95,951	210	95,846	4,246,232	44.3
31-32	0.002237	95,742	214	95,634	4,150,385	43.3
32-33	0.002286	95,527	218	95,418	4,054,751	42.4
33-34	0.002330	95,309	222	95,198	3,959,333	41.5
34-35	0.002375	95,087	226	94,974	3,864,135	40.6
35-36	0.002436	94,861	231	94,745	3,769,161	39.7
36-37	0.002517	94,630	238	94,511	3,674,415	38.8
37-38	0.002612	94,392	247	94,268	3,579,905	37.9
38-39	0.002720	94,145	256	94,017	3,485,636	37.0
39-40	0.002850	93,889	268	93,755	3,391,619	36.1
40-41	0.003002	93,621	281	93,481	3,297,864	35.2
41-42	0.003191	93,340	298	93,192	3,204,383	34.3
42-43	0.003439	93,043	320	92,883	3,111,191	33.4
43-44	0.003752	92,723	348	92,549	3,018,309	32.6
44-45	0.004120	92,375	381	92,184	2,925,760	31.7
45-46	0.004504	91,994	414	91,787	2,833,576	30.8
46-47	0.004913	91,580	450	91,355	2,741,789	29.9
47-48	0.005395	91,130	492	90,884	2,650,434	29.1
48-49	0.005970	90,638	541	90,368	2,559,550	28.2
49-50	0.006628	90,097	597	89,799	2,469,182	27.4
50-51	0.007319	89,500	655	89,172	2,379,384	26.6
51-52	0.008035	88,845	714	88,488	2,290,211	25.8
52-53	0.008832	88,131	778	87,742	2,201,723	25.0
53-54	0.009743	87,353	851	86,927	2,113,982	24.2
54-55	0.010771	86,502	932	86,036	2,027,054	23.4
55-56	0.011936	85,570	1,021	85,059	1,941,019	22.7
56-57	0.013175	84,549	1,114	83,992	1,855,959	22.0
57-58	0.014384	83,435	1,200	82,835	1,771,968	21.2
58-59	0.015463	82,235	1,272	81,599	1,689,133	20.5
59-60	0.016430	80,963	1,330	80,298	1,607,535	19.9
60-61	0.017422	79,633	1,387	78,939	1,527,237	19.2
61-62	0.018523	78,245	1,449	77,521	1,448,298	18.5

Table 8. Life table for black males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table08.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.019671	76,796	1,511	76,041	1,370,777	17.8
63-64	0.020903	75,285	1,574	74,498	1,294,737	17.2
64-65	0.022255	73,712	1,640	72,891	1,220,238	16.6
65-66	0.023760	72,071	1,712	71,215	1,147,347	15.9
66-67	0.025476	70,359	1,792	69,463	1,076,132	15.3
67-68	0.027324	68,566	1,873	67,630	1,006,669	14.7
68-69	0.029295	66,693	1,954	65,716	939,040	14.1
69-70	0.031403	64,739	2,033	63,723	873,324	13.5
70-71	0.033552	62,706	2,104	61,654	809,601	12.9
71-72	0.035779	60,602	2,168	59,518	747,947	12.3
72-73	0.038461	58,434	2,247	57,310	688,429	11.8
73-74	0.041567	56,187	2,336	55,019	631,119	11.2
74-75	0.044855	53,851	2,415	52,643	576,100	10.7
75-76	0.048612	51,436	2,500	50,185	523,457	10.2
76-77	0.052922	48,935	2,590	47,640	473,271	9.7
77-78	0.057086	46,345	2,646	45,023	425,631	9.2
78-79	0.061352	43,700	2,681	42,359	380,608	8.7
79-80	0.067074	41,019	2,751	39,643	338,249	8.2
80-81	0.073701	38,267	2,820	36,857	298,606	7.8
81-82	0.079605	35,447	2,822	34,036	261,749	7.4
82-83	0.087127	32,625	2,843	31,204	227,713	7.0
83-84	0.094508	29,783	2,815	28,375	196,509	6.6
84-85	0.102404	26,968	2,762	25,587	168,134	6.2
85-86	0.110831	24,206	2,683	22,865	142,547	5.9
86-87	0.119805	21,524	2,579	20,234	119,682	5.6
87-88	0.129336	18,945	2,450	17,720	99,447	5.2
88-89	0.139432	16,495	2,300	15,345	81,727	5.0
89-90	0.150096	14,195	2,131	13,129	66,383	4.7
90-91	0.161327	12,064	1,946	11,091	53,253	4.4
91-92	0.173115	10,118	1,752	9,242	42,162	4.2
92-93	0.185450	8,366	1,552	7,591	32,920	3.9
93-94	0.198310	6,815	1,351	6,139	25,329	3.7
94-95	0.211669	5,463	1,156	4,885	19,190	3.5
95-96	0.225495	4,307	971	3,821	14,305	3.3
96-97	0.239748	3,336	800	2,936	10,484	3.1
97-98	0.254383	2,536	645	2,213	7,548	3.0
98-99	0.269348	1,891	509	1,636	5,334	2.8
99-100	0.284585	1,382	393	1,185	3,698	2.7
100 and over	1.000000	988	988	2,513	2,513	2.5

Table 9. Life table for black females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table09.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.010472	100,000	1,047	99,075	7,799,627	78.0
1-2	0.000596	98,953	59	98,923	7,700,551	77.8
2-3	0.000339	98,894	34	98,877	7,601,628	76.9
3-4	0.000222	98,860	22	98,849	7,502,751	75.9
4-5	0.000183	98,838	18	98,829	7,403,902	74.9
5-6	0.000165	98,820	16	98,812	7,305,072	73.9
6-7	0.000138	98,804	14	98,797	7,206,260	72.9
7-8	0.000121	98,790	12	98,784	7,107,463	71.9
8-9	0.000113	98,778	11	98,773	7,008,679	71.0
9-10	0.000114	98,767	11	98,762	6,909,906	70.0
10-11	0.000121	98,756	12	98,750	6,811,145	69.0
11-12	0.000136	98,744	13	98,737	6,712,395	68.0
12-13	0.000155	98,730	15	98,723	6,613,657	67.0
13-14	0.000178	98,715	18	98,706	6,514,935	66.0
14-15	0.000204	98,698	20	98,687	6,416,228	65.0
15-16	0.000230	98,677	23	98,666	6,317,541	64.0
16-17	0.000259	98,655	26	98,642	6,218,875	63.0
17-18	0.000295	98,629	29	98,615	6,120,233	62.1
18-19	0.000341	98,600	34	98,583	6,021,618	61.1
19-20	0.000397	98,566	39	98,547	5,923,035	60.1
20-21	0.000461	98,527	45	98,505	5,824,488	59.1
21-22	0.000527	98,482	52	98,456	5,725,984	58.1
22-23	0.000586	98,430	58	98,401	5,627,528	57.2
23-24	0.000632	98,372	62	98,341	5,529,126	56.2
24-25	0.000669	98,310	66	98,277	5,430,785	55.2
25-26	0.000707	98,244	69	98,210	5,332,508	54.3
26-27	0.000752	98,175	74	98,138	5,234,298	53.3
27-28	0.000796	98,101	78	98,062	5,136,160	52.4
28-29	0.000839	98,023	82	97,982	5,038,098	51.4
29-30	0.000884	97,941	87	97,898	4,940,116	50.4
30-31	0.000931	97,854	91	97,809	4,842,218	49.5
31-32	0.000987	97,763	96	97,715	4,744,410	48.5
32-33	0.001055	97,667	103	97,615	4,646,695	47.6
33-34	0.001141	97,564	111	97,508	4,549,080	46.6
34-35	0.001242	97,452	121	97,392	4,451,572	45.7
35-36	0.001359	97,331	132	97,265	4,354,180	44.7
36-37	0.001484	97,199	144	97,127	4,256,915	43.8
37-38	0.001607	97,055	156	96,977	4,159,788	42.9
38-39	0.001725	96,899	167	96,815	4,062,811	41.9
39-40	0.001847	96,732	179	96,642	3,965,996	41.0
40-41	0.001978	96,553	191	96,458	3,869,353	40.1
41-42	0.002135	96,362	206	96,259	3,772,896	39.2
42-43	0.002330	96,156	224	96,044	3,676,636	38.2
43-44	0.002570	95,932	247	95,809	3,580,592	37.3
44-45	0.002842	95,686	272	95,550	3,484,783	36.4
45-46	0.003113	95,414	297	95,265	3,389,233	35.5
46-47	0.003392	95,117	323	94,955	3,293,968	34.6
47-48	0.003715	94,794	352	94,618	3,199,012	33.7
48-49	0.004097	94,442	387	94,249	3,104,394	32.9
49-50	0.004528	94,055	426	93,842	3,010,146	32.0
50-51	0.004989	93,629	467	93,396	2,916,304	31.1
51-52	0.005451	93,162	508	92,908	2,822,908	30.3
52-53	0.005906	92,654	547	92,381	2,730,000	29.5
53-54	0.006347	92,107	585	91,815	2,637,620	28.6
54-55	0.006790	91,522	621	91,212	2,545,805	27.8
55-56	0.007269	90,901	661	90,571	2,454,593	27.0
56-57	0.007793	90,240	703	89,889	2,364,023	26.2
57-58	0.008335	89,537	746	89,164	2,274,134	25.4
58-59	0.008884	88,791	789	88,396	2,184,970	24.6
59-60	0.009446	88,002	831	87,586	2,096,574	23.8
60-61	0.010047	87,171	876	86,733	2,008,988	23.0
61-62	0.010710	86,295	924	85,833	1,922,255	22.3

Table 9. Life table for black females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table09.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.011448	85,371	977	84,882	1,836,422	21.5
63-64	0.012289	84,393	1,037	83,875	1,751,540	20.8
64-65	0.013250	83,356	1,104	82,804	1,667,665	20.0
65-66	0.014358	82,252	1,181	81,661	1,584,861	19.3
66-67	0.015610	81,071	1,266	80,438	1,503,200	18.5
67-68	0.016948	79,805	1,353	79,129	1,422,762	17.8
68-69	0.018307	78,453	1,436	77,735	1,343,633	17.1
69-70	0.019685	77,017	1,516	76,259	1,265,898	16.4
70-71	0.021149	75,501	1,597	74,702	1,189,639	15.8
71-72	0.022737	73,904	1,680	73,064	1,114,937	15.1
72-73	0.024563	72,223	1,774	71,336	1,041,873	14.4
73-74	0.026710	70,449	1,882	69,509	970,537	13.8
74-75	0.028773	68,568	1,973	67,581	901,028	13.1
75-76	0.031179	66,595	2,076	65,557	833,447	12.5
76-77	0.033867	64,519	2,185	63,426	767,890	11.9
77-78	0.037005	62,333	2,307	61,180	704,464	11.3
78-79	0.040523	60,027	2,432	58,811	643,284	10.7
79-80	0.044423	57,594	2,559	56,315	584,474	10.1
80-81	0.049445	55,036	2,721	53,675	528,158	9.6
81-82	0.054073	52,315	2,829	50,900	474,483	9.1
82-83	0.058814	49,486	2,910	48,031	423,583	8.6
83-84	0.064888	46,575	3,022	45,064	375,552	8.1
84-85	0.072357	43,553	3,151	41,978	330,488	7.6
85-86	0.080202	40,402	3,240	38,782	288,510	7.1
86-87	0.087942	37,162	3,268	35,528	249,729	6.7
87-88	0.096306	33,893	3,264	32,261	214,201	6.3
88-89	0.105320	30,629	3,226	29,016	181,940	5.9
89-90	0.115009	27,403	3,152	25,828	152,923	5.6
90-91	0.125389	24,252	3,041	22,731	127,096	5.2
91-92	0.136475	21,211	2,895	19,764	104,364	4.9
92-93	0.148272	18,316	2,716	16,958	84,601	4.6
93-94	0.160779	15,600	2,508	14,346	67,643	4.3
94-95	0.173988	13,092	2,278	11,953	53,296	4.1
95-96	0.187879	10,814	2,032	9,798	41,343	3.8
96-97	0.202423	8,783	1,778	7,894	31,545	3.6
97-98	0.217581	7,005	1,524	6,243	23,651	3.4
98-99	0.233304	5,481	1,279	4,841	17,408	3.2
99-100	0.249532	4,202	1,049	3,678	12,567	3.0
100 and over	1.000000	3,153	3,153	8,889	8,889	2.8

Table 10. Life table for the Hispanic population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table10.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005216	100,000	522	99,545	8,140,343	81.4
1-2	0.000347	99,478	34	99,461	8,040,799	80.8
2-3	0.000237	99,444	24	99,432	7,941,337	79.9
3-4	0.000182	99,420	18	99,411	7,841,905	78.9
4-5	0.000147	99,402	15	99,395	7,742,494	77.9
5-6	0.000118	99,388	12	99,382	7,643,099	76.9
6-7	0.000099	99,376	10	99,371	7,543,717	75.9
7-8	0.000085	99,366	8	99,362	7,444,346	74.9
8-9	0.000074	99,358	7	99,354	7,344,984	73.9
9-10	0.000065	99,350	6	99,347	7,245,630	72.9
10-11	0.000063	99,344	6	99,341	7,146,283	71.9
11-12	0.000071	99,338	7	99,334	7,046,942	70.9
12-13	0.000098	99,331	10	99,326	6,947,608	69.9
13-14	0.000145	99,321	14	99,314	6,848,282	69.0
14-15	0.000208	99,307	21	99,296	6,748,969	68.0
15-16	0.000276	99,286	27	99,272	6,649,672	67.0
16-17	0.000343	99,258	34	99,241	6,550,400	66.0
17-18	0.000406	99,224	40	99,204	6,451,159	65.0
18-19	0.000464	99,184	46	99,161	6,351,955	64.0
19-20	0.000518	99,138	51	99,112	6,252,794	63.1
20-21	0.000574	99,087	57	99,058	6,153,681	62.1
21-22	0.000629	99,030	62	98,999	6,054,623	61.1
22-23	0.000669	98,968	66	98,935	5,955,624	60.2
23-24	0.000688	98,901	68	98,867	5,856,690	59.2
24-25	0.000691	98,833	68	98,799	5,757,822	58.3
25-26	0.000689	98,765	68	98,731	5,659,023	57.3
26-27	0.000689	98,697	68	98,663	5,560,292	56.3
27-28	0.000691	98,629	68	98,595	5,461,629	55.4
28-29	0.000697	98,561	69	98,526	5,363,034	54.4
29-30	0.000708	98,492	70	98,457	5,264,508	53.5
30-31	0.000720	98,422	71	98,387	5,166,051	52.5
31-32	0.000734	98,352	72	98,315	5,067,664	51.5
32-33	0.000754	98,279	74	98,242	4,969,348	50.6
33-34	0.000782	98,205	77	98,167	4,871,106	49.6
34-35	0.000819	98,128	80	98,088	4,772,939	48.6
35-36	0.000861	98,048	84	98,006	4,674,851	47.7
36-37	0.000911	97,964	89	97,919	4,576,845	46.7
37-38	0.000970	97,874	95	97,827	4,478,926	45.8
38-39	0.001041	97,779	102	97,729	4,381,099	44.8
39-40	0.001124	97,678	110	97,623	4,283,371	43.9
40-41	0.001217	97,568	119	97,508	4,185,748	42.9
41-42	0.001321	97,449	129	97,385	4,088,239	42.0
42-43	0.001444	97,320	141	97,250	3,990,855	41.0
43-44	0.001587	97,180	154	97,103	3,893,604	40.1
44-45	0.001747	97,026	170	96,941	3,796,502	39.1
45-46	0.001920	96,856	186	96,763	3,699,561	38.2
46-47	0.002104	96,670	203	96,568	3,602,798	37.3
47-48	0.002302	96,467	222	96,356	3,506,229	36.3
48-49	0.002516	96,245	242	96,124	3,409,873	35.4
49-50	0.002749	96,003	264	95,871	3,313,750	34.5
50-51	0.003007	95,739	288	95,595	3,217,879	33.6
51-52	0.003284	95,451	313	95,294	3,122,285	32.7
52-53	0.003573	95,137	340	94,967	3,026,991	31.8
53-54	0.003869	94,797	367	94,614	2,932,023	30.9
54-55	0.004178	94,431	395	94,233	2,837,409	30.0
55-56	0.004514	94,036	425	93,824	2,743,176	29.2
56-57	0.004889	93,611	458	93,383	2,649,352	28.3
57-58	0.005298	93,154	494	92,907	2,555,970	27.4
58-59	0.005741	92,660	532	92,394	2,463,063	26.6
59-60	0.006215	92,128	573	91,842	2,370,669	25.7
60-61	0.006728	91,556	616	91,248	2,278,827	24.9
61-62	0.007285	90,940	662	90,609	2,187,579	24.1

Table 10. Life table for the Hispanic population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/Health_Statistics/NCHS/Publications/NVSR/63_07/Table10.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.007887	90,277	712	89,921	2,096,970	23.2
63-64	0.008551	89,565	766	89,182	2,007,049	22.4
64-65	0.009297	88,799	826	88,387	1,917,867	21.6
65-66	0.010151	87,974	893	87,527	1,829,480	20.8
66-67	0.011116	87,081	968	86,597	1,741,953	20.0
67-68	0.012168	86,113	1,048	85,589	1,655,356	19.2
68-69	0.013266	85,065	1,128	84,501	1,569,767	18.5
69-70	0.014401	83,937	1,209	83,332	1,485,266	17.7
70-71	0.015588	82,728	1,290	82,083	1,401,934	16.9
71-72	0.016901	81,438	1,376	80,750	1,319,851	16.2
72-73	0.018402	80,062	1,473	79,325	1,239,101	15.5
73-74	0.020176	78,589	1,586	77,796	1,159,775	14.8
74-75	0.022237	77,003	1,712	76,147	1,081,980	14.1
75-76	0.024470	75,291	1,842	74,369	1,005,833	13.4
76-77	0.026880	73,448	1,974	72,461	931,463	12.7
77-78	0.029669	71,474	2,121	70,414	859,002	12.0
78-79	0.032894	69,353	2,281	68,213	788,588	11.4
79-80	0.036504	67,072	2,448	65,848	720,376	10.7
80-81	0.040419	64,624	2,612	63,318	654,528	10.1
81-82	0.044945	62,012	2,787	60,618	591,210	9.5
82-83	0.049858	59,225	2,953	57,748	530,592	9.0
83-84	0.055318	56,272	3,113	54,715	472,844	8.4
84-85	0.062169	53,159	3,305	51,507	418,128	7.9
85-86	0.069879	49,854	3,484	48,112	366,622	7.4
86-87	0.078223	46,370	3,627	44,557	318,509	6.9
87-88	0.087405	42,743	3,736	40,875	273,953	6.4
88-89	0.097470	39,007	3,802	37,106	233,078	6.0
89-90	0.108460	35,205	3,818	33,296	195,971	5.6
90-91	0.120403	31,387	3,779	29,497	162,676	5.2
91-92	0.133320	27,608	3,681	25,767	133,178	4.8
92-93	0.147215	23,927	3,522	22,166	107,411	4.5
93-94	0.162079	20,405	3,307	18,751	85,245	4.2
94-95	0.177882	17,097	3,041	15,577	66,494	3.9
95-96	0.194574	14,056	2,735	12,689	50,917	3.6
96-97	0.212087	11,321	2,401	10,121	38,228	3.4
97-98	0.230330	8,920	2,055	7,893	28,108	3.2
98-99	0.249192	6,866	1,711	6,010	20,215	2.9
99-100	0.268544	5,155	1,384	4,463	14,205	2.8
100 and over	1.000000	3,770	3,770	9,742	9,742	2.6

Table 11. Life table for Hispanic males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table11.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005685	100,000	568	99,503	7,871,743	78.7
1-2	0.000340	99,432	34	99,415	7,772,240	78.2
2-3	0.000277	99,398	28	99,384	7,672,826	77.2
3-4	0.000211	99,370	21	99,360	7,573,442	76.2
4-5	0.000182	99,349	18	99,340	7,474,082	75.2
5-6	0.000138	99,331	14	99,324	7,374,742	74.2
6-7	0.000117	99,317	12	99,312	7,275,417	73.3
7-8	0.000100	99,306	10	99,301	7,176,106	72.3
8-9	0.000081	99,296	8	99,292	7,076,805	71.3
9-10	0.000062	99,288	6	99,285	6,977,513	70.3
10-11	0.000049	99,282	5	99,279	6,878,229	69.3
11-12	0.000054	99,277	5	99,274	6,778,949	68.3
12-13	0.000092	99,271	9	99,267	6,679,675	67.3
13-14	0.000171	99,262	17	99,254	6,580,409	66.3
14-15	0.000279	99,245	28	99,231	6,481,155	65.3
15-16	0.000397	99,218	39	99,198	6,381,923	64.3
16-17	0.000508	99,178	50	99,153	6,282,726	63.3
17-18	0.000611	99,128	61	99,097	6,183,573	62.4
18-19	0.000698	99,067	69	99,033	6,084,475	61.4
19-20	0.000774	98,998	77	98,960	5,985,443	60.5
20-21	0.000850	98,921	84	98,879	5,886,483	59.5
21-22	0.000925	98,837	91	98,792	5,787,604	58.6
22-23	0.000980	98,746	97	98,697	5,688,812	57.6
23-24	0.001008	98,649	99	98,599	5,590,115	56.7
24-25	0.001016	98,550	100	98,500	5,491,515	55.7
25-26	0.001017	98,449	100	98,399	5,393,016	54.8
26-27	0.001018	98,349	100	98,299	5,294,616	53.8
27-28	0.001022	98,249	100	98,199	5,196,317	52.9
28-29	0.001031	98,149	101	98,098	5,098,118	51.9
29-30	0.001045	98,048	102	97,996	5,000,020	51.0
30-31	0.001061	97,945	104	97,893	4,902,023	50.0
31-32	0.001078	97,841	105	97,789	4,804,130	49.1
32-33	0.001099	97,736	107	97,682	4,706,341	48.2
33-34	0.001125	97,628	110	97,574	4,608,659	47.2
34-35	0.001157	97,519	113	97,462	4,511,086	46.3
35-36	0.001196	97,406	116	97,348	4,413,624	45.3
36-37	0.001243	97,289	121	97,229	4,316,276	44.4
37-38	0.001306	97,168	127	97,105	4,219,047	43.4
38-39	0.001388	97,042	135	96,974	4,121,942	42.5
39-40	0.001490	96,907	144	96,835	4,024,968	41.5
40-41	0.001604	96,762	155	96,685	3,928,133	40.6
41-42	0.001730	96,607	167	96,524	3,831,448	39.7
42-43	0.001873	96,440	181	96,350	3,734,925	38.7
43-44	0.002035	96,260	196	96,162	3,638,575	37.8
44-45	0.002215	96,064	213	95,957	3,542,413	36.9
45-46	0.002411	95,851	231	95,735	3,446,456	36.0
46-47	0.002625	95,620	251	95,494	3,350,721	35.0
47-48	0.002859	95,369	273	95,232	3,255,226	34.1
48-49	0.003117	95,096	296	94,948	3,159,994	33.2
49-50	0.003404	94,800	323	94,638	3,065,046	32.3
50-51	0.003716	94,477	351	94,301	2,970,408	31.4
51-52	0.004058	94,126	382	93,935	2,876,106	30.6
52-53	0.004443	93,744	417	93,536	2,782,171	29.7
53-54	0.004879	93,327	455	93,100	2,688,636	28.8
54-55	0.005367	92,872	498	92,623	2,595,536	27.9
55-56	0.005920	92,374	547	92,100	2,502,913	27.1
56-57	0.006522	91,827	599	91,527	2,410,813	26.3
57-58	0.007132	91,228	651	90,903	2,319,286	25.4
58-59	0.007713	90,577	699	90,228	2,228,383	24.6
59-60	0.008268	89,879	743	89,507	2,138,155	23.8
60-61	0.008844	89,135	788	88,741	2,048,648	23.0
61-62	0.009480	88,347	838	87,928	1,959,907	22.2

Table 11. Life table for Hispanic males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table11.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.010178	87,510	891	87,064	1,871,979	21.4
63-64	0.010973	86,619	950	86,144	1,784,914	20.6
64-65	0.011893	85,669	1,019	85,159	1,698,770	19.8
65-66	0.012939	84,650	1,095	84,102	1,613,611	19.1
66-67	0.014113	83,554	1,179	82,965	1,529,509	18.3
67-68	0.015429	82,375	1,271	81,740	1,446,544	17.6
68-69	0.016846	81,104	1,366	80,421	1,364,805	16.8
69-70	0.018336	79,738	1,462	79,007	1,284,383	16.1
70-71	0.019901	78,276	1,558	77,497	1,205,377	15.4
71-72	0.021598	76,718	1,657	75,890	1,127,880	14.7
72-73	0.023467	75,061	1,761	74,180	1,051,990	14.0
73-74	0.025586	73,300	1,875	72,362	977,809	13.3
74-75	0.027988	71,424	1,999	70,425	905,447	12.7
75-76	0.030555	69,425	2,121	68,365	835,023	12.0
76-77	0.033308	67,304	2,242	66,183	766,658	11.4
77-78	0.036583	65,062	2,380	63,872	700,475	10.8
78-79	0.040445	62,682	2,535	61,414	636,603	10.2
79-80	0.044903	60,147	2,701	58,796	575,188	9.6
80-81	0.049945	57,446	2,869	56,012	516,392	9.0
81-82	0.055892	54,577	3,050	53,052	460,380	8.4
82-83	0.061891	51,527	3,189	49,932	407,329	7.9
83-84	0.068186	48,338	3,296	46,690	357,396	7.4
84-85	0.077539	45,042	3,492	43,295	310,707	6.9
85-86	0.086673	41,549	3,601	39,749	267,412	6.4
86-87	0.096694	37,948	3,669	36,113	227,663	6.0
87-88	0.107644	34,279	3,690	32,434	191,550	5.6
88-89	0.119555	30,589	3,657	28,760	159,116	5.2
89-90	0.132450	26,932	3,567	25,148	130,356	4.8
90-91	0.146338	23,365	3,419	21,655	105,208	4.5
91-92	0.161210	19,945	3,215	18,338	83,553	4.2
92-93	0.177041	16,730	2,962	15,249	65,215	3.9
93-94	0.193785	13,768	2,668	12,434	49,966	3.6
94-95	0.211377	11,100	2,346	9,927	37,532	3.4
95-96	0.229727	8,754	2,011	7,748	27,605	3.2
96-97	0.248729	6,743	1,677	5,904	19,856	2.9
97-98	0.268255	5,066	1,359	4,386	13,952	2.8
98-99	0.288163	3,707	1,068	3,173	9,566	2.6
99-100	0.308299	2,639	813	2,232	6,393	2.4
100 and over	1.000000	1,825	1,825	4,161	4,161	2.3

Table 12. Life table for Hispanic females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table12.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.004729	100,000	473	99,588	8,382,303	83.8
1-2	0.000354	99,527	35	99,510	8,282,715	83.2
2-3	0.000194	99,492	19	99,482	8,183,206	82.2
3-4	0.000153	99,473	15	99,465	8,083,724	81.3
4-5	0.000111	99,457	11	99,452	7,984,259	80.3
5-6	0.000096	99,446	10	99,442	7,884,807	79.3
6-7	0.000079	99,437	8	99,433	7,785,365	78.3
7-8	0.000069	99,429	7	99,425	7,685,932	77.3
8-9	0.000066	99,422	7	99,419	7,586,507	76.3
9-10	0.000068	99,416	7	99,412	7,487,088	75.3
10-11	0.000077	99,409	8	99,405	7,387,676	74.3
11-12	0.000089	99,401	9	99,397	7,288,271	73.3
12-13	0.000103	99,392	10	99,387	7,188,875	72.3
13-14	0.000118	99,382	12	99,376	7,089,488	71.3
14-15	0.000133	99,370	13	99,364	6,990,111	70.3
15-16	0.000149	99,357	15	99,350	6,890,748	69.4
16-17	0.000168	99,342	17	99,334	6,791,398	68.4
17-18	0.000188	99,325	19	99,316	6,692,064	67.4
18-19	0.000211	99,307	21	99,296	6,592,748	66.4
19-20	0.000236	99,286	23	99,274	6,493,452	65.4
20-21	0.000265	99,262	26	99,249	6,394,178	64.4
21-22	0.000293	99,236	29	99,222	6,294,929	63.4
22-23	0.000313	99,207	31	99,192	6,195,707	62.5
23-24	0.000323	99,176	32	99,160	6,096,515	61.5
24-25	0.000323	99,144	32	99,128	5,997,355	60.5
25-26	0.000323	99,112	32	99,096	5,898,227	59.5
26-27	0.000325	99,080	32	99,064	5,799,131	58.5
27-28	0.000328	99,048	33	99,031	5,700,068	57.5
28-29	0.000333	99,015	33	98,999	5,601,036	56.6
29-30	0.000341	98,982	34	98,965	5,502,037	55.6
30-31	0.000349	98,949	35	98,931	5,403,072	54.6
31-32	0.000361	98,914	36	98,896	5,304,141	53.6
32-33	0.000382	98,878	38	98,859	5,205,245	52.6
33-34	0.000415	98,841	41	98,820	5,106,385	51.7
34-35	0.000459	98,800	45	98,777	5,007,565	50.7
35-36	0.000510	98,754	50	98,729	4,908,788	49.7
36-37	0.000565	98,704	56	98,676	4,810,059	48.7
37-38	0.000622	98,648	61	98,617	4,711,383	47.8
38-39	0.000680	98,587	67	98,553	4,612,766	46.8
39-40	0.000742	98,520	73	98,483	4,514,212	45.8
40-41	0.000809	98,447	80	98,407	4,415,729	44.9
41-42	0.000888	98,367	87	98,323	4,317,322	43.9
42-43	0.000988	98,280	97	98,231	4,218,999	42.9
43-44	0.001115	98,183	109	98,128	4,120,768	42.0
44-45	0.001261	98,073	124	98,011	4,022,640	41.0
45-46	0.001417	97,949	139	97,880	3,924,628	40.1
46-47	0.001577	97,811	154	97,734	3,826,748	39.1
47-48	0.001744	97,656	170	97,571	3,729,015	38.2
48-49	0.001921	97,486	187	97,393	3,631,443	37.3
49-50	0.002107	97,299	205	97,196	3,534,051	36.3
50-51	0.002316	97,094	225	96,981	3,436,854	35.4
51-52	0.002536	96,869	246	96,746	3,339,873	34.5
52-53	0.002738	96,623	265	96,491	3,243,127	33.6
53-54	0.002903	96,359	280	96,219	3,146,636	32.7
54-55	0.003045	96,079	293	95,933	3,050,417	31.7
55-56	0.003182	95,787	305	95,634	2,954,484	30.8
56-57	0.003353	95,482	320	95,322	2,858,850	29.9
57-58	0.003588	95,162	341	94,991	2,763,528	29.0
58-59	0.003919	94,820	372	94,634	2,668,537	28.1
59-60	0.004335	94,449	409	94,244	2,573,903	27.3
60-61	0.004807	94,039	452	93,813	2,479,659	26.4
61-62	0.005310	93,587	497	93,339	2,385,846	25.5

Table 12. Life table for Hispanic females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table12.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.005849	93,090	545	92,818	2,292,508	24.6
63-64	0.006423	92,546	594	92,248	2,199,690	23.8
64-65	0.007047	91,951	648	91,627	2,107,441	22.9
65-66	0.007772	91,303	710	90,948	2,015,814	22.1
66-67	0.008601	90,594	779	90,204	1,924,866	21.2
67-68	0.009477	89,814	851	89,389	1,834,662	20.4
68-69	0.010353	88,963	921	88,503	1,745,273	19.6
69-70	0.011237	88,042	989	87,547	1,656,771	18.8
70-71	0.012156	87,053	1,058	86,524	1,569,223	18.0
71-72	0.013203	85,995	1,135	85,427	1,482,699	17.2
72-73	0.014462	84,859	1,227	84,246	1,397,272	16.5
73-74	0.016023	83,632	1,340	82,962	1,313,027	15.7
74-75	0.017892	82,292	1,472	81,556	1,230,065	14.9
75-76	0.019943	80,820	1,612	80,014	1,148,509	14.2
76-77	0.022163	79,208	1,755	78,330	1,068,495	13.5
77-78	0.024689	77,452	1,912	76,496	990,165	12.8
78-79	0.027586	75,540	2,084	74,498	913,669	12.1
79-80	0.030762	73,456	2,260	72,326	839,171	11.4
80-81	0.034114	71,197	2,429	69,982	766,844	10.8
81-82	0.037966	68,768	2,611	67,462	696,862	10.1
82-83	0.042470	66,157	2,810	64,752	629,400	9.5
83-84	0.047749	63,347	3,025	61,835	564,648	8.9
84-85	0.054184	60,323	3,269	58,688	502,813	8.3
85-86	0.061104	57,054	3,486	55,311	444,125	7.8
86-87	0.069014	53,568	3,697	51,719	388,814	7.3
87-88	0.077805	49,871	3,880	47,931	337,094	6.8
88-89	0.087538	45,991	4,026	43,978	289,164	6.3
89-90	0.098268	41,965	4,124	39,903	245,186	5.8
90-91	0.110042	37,841	4,164	35,759	205,283	5.4
91-92	0.122896	33,677	4,139	31,607	169,524	5.0
92-93	0.136851	29,538	4,042	27,517	137,917	4.7
93-94	0.151910	25,496	3,873	23,559	110,400	4.3
94-95	0.168054	21,623	3,634	19,806	86,840	4.0
95-96	0.185241	17,989	3,332	16,323	67,034	3.7
96-97	0.203404	14,657	2,981	13,166	50,712	3.5
97-98	0.222448	11,675	2,597	10,377	37,546	3.2
98-99	0.242253	9,078	2,199	7,979	27,169	3.0
99-100	0.262676	6,879	1,807	5,976	19,190	2.8
100 and over	1.000000	5,072	5,072	13,215	13,215	2.6

Table 13. Life table for the non-Hispanic white population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table13.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005161	100,000	516	99,549	7,878,950	78.8
1-2	0.000396	99,484	39	99,464	7,779,400	78.2
2-3	0.000247	99,445	25	99,432	7,679,936	77.2
3-4	0.000206	99,420	20	99,410	7,580,504	76.2
4-5	0.000141	99,399	14	99,392	7,481,094	75.3
5-6	0.000140	99,385	14	99,379	7,381,701	74.3
6-7	0.000126	99,372	13	99,365	7,282,323	73.3
7-8	0.000114	99,359	11	99,353	7,182,958	72.3
8-9	0.000100	99,348	10	99,343	7,083,604	71.3
9-10	0.000087	99,338	9	99,333	6,984,261	70.3
10-11	0.000079	99,329	8	99,325	6,884,928	69.3
11-12	0.000084	99,321	8	99,317	6,785,603	68.3
12-13	0.000111	99,313	11	99,307	6,686,286	67.3
13-14	0.000166	99,302	17	99,294	6,586,978	66.3
14-15	0.000240	99,285	24	99,274	6,487,684	65.3
15-16	0.000317	99,262	31	99,246	6,388,411	64.4
16-17	0.000392	99,230	39	99,211	6,289,165	63.4
17-18	0.000471	99,191	47	99,168	6,189,954	62.4
18-19	0.000554	99,144	55	99,117	6,090,786	61.4
19-20	0.000639	99,090	63	99,058	5,991,669	60.5
20-21	0.000730	99,026	72	98,990	5,892,612	59.5
21-22	0.000817	98,954	81	98,914	5,793,621	58.5
22-23	0.000883	98,873	87	98,830	5,694,708	57.6
23-24	0.000919	98,786	91	98,740	5,595,878	56.6
24-25	0.000934	98,695	92	98,649	5,497,138	55.7
25-26	0.000943	98,603	93	98,556	5,398,489	54.7
26-27	0.000957	98,510	94	98,463	5,299,933	53.8
27-28	0.000972	98,416	96	98,368	5,201,470	52.9
28-29	0.000994	98,320	98	98,271	5,103,102	51.9
29-30	0.001022	98,222	100	98,172	5,004,831	51.0
30-31	0.001056	98,122	104	98,070	4,906,660	50.0
31-32	0.001092	98,018	107	97,965	4,808,590	49.1
32-33	0.001131	97,911	111	97,856	4,710,625	48.1
33-34	0.001171	97,800	115	97,743	4,612,769	47.2
34-35	0.001214	97,686	119	97,626	4,515,026	46.2
35-36	0.001271	97,567	124	97,505	4,417,400	45.3
36-37	0.001342	97,443	131	97,378	4,319,895	44.3
37-38	0.001418	97,312	138	97,243	4,222,517	43.4
38-39	0.001497	97,174	145	97,102	4,125,273	42.5
39-40	0.001587	97,029	154	96,952	4,028,172	41.5
40-41	0.001685	96,875	163	96,793	3,931,220	40.6
41-42	0.001808	96,712	175	96,624	3,834,426	39.6
42-43	0.001976	96,537	191	96,442	3,737,802	38.7
43-44	0.002195	96,346	212	96,240	3,641,360	37.8
44-45	0.002446	96,135	235	96,017	3,545,120	36.9
45-46	0.002700	95,900	259	95,770	3,449,103	36.0
46-47	0.002951	95,641	282	95,500	3,353,333	35.1
47-48	0.003215	95,358	307	95,205	3,257,833	34.2
48-49	0.003500	95,052	333	94,886	3,162,628	33.3
49-50	0.003805	94,719	360	94,539	3,067,742	32.4
50-51	0.004131	94,359	390	94,164	2,973,203	31.5
51-52	0.004466	93,969	420	93,759	2,879,040	30.6
52-53	0.004807	93,549	450	93,324	2,785,280	29.8
53-54	0.005155	93,100	480	92,860	2,691,956	28.9
54-55	0.005520	92,620	511	92,364	2,599,096	28.1
55-56	0.005913	92,108	545	91,836	2,506,732	27.2
56-57	0.006347	91,564	581	91,273	2,414,896	26.4
57-58	0.006824	90,983	621	90,672	2,323,623	25.5
58-59	0.007342	90,362	663	90,030	2,232,951	24.7
59-60	0.007895	89,698	708	89,344	2,142,921	23.9
60-61	0.008481	88,990	755	88,613	2,053,576	23.1
61-62	0.009107	88,235	804	87,834	1,964,963	22.3

Table 13. Life table for the non-Hispanic white population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table13.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63.....	0.009798	87,432	857	87,004	1,877,130	21.5
63-64.....	0.010589	86,575	917	86,117	1,790,126	20.7
64-65.....	0.011506	85,659	986	85,166	1,704,009	19.9
65-66.....	0.012595	84,673	1,066	84,140	1,618,843	19.1
66-67.....	0.013829	83,607	1,156	83,028	1,534,704	18.4
67-68.....	0.015127	82,450	1,247	81,827	1,451,675	17.6
68-69.....	0.016435	81,203	1,335	80,536	1,369,849	16.9
69-70.....	0.017830	79,869	1,424	79,157	1,289,313	16.1
70-71.....	0.019380	78,445	1,520	77,684	1,210,156	15.4
71-72.....	0.021156	76,924	1,627	76,111	1,132,472	14.7
72-73.....	0.023168	75,297	1,744	74,425	1,056,361	14.0
73-74.....	0.025444	73,552	1,871	72,617	981,937	13.4
74-75.....	0.028018	71,681	2,008	70,677	909,320	12.7
75-76.....	0.030798	69,673	2,146	68,600	838,643	12.0
76-77.....	0.033779	67,527	2,281	66,386	770,044	11.4
77-78.....	0.037293	65,246	2,433	64,029	703,657	10.8
78-79.....	0.041246	62,813	2,591	61,517	639,628	10.2
79-80.....	0.045583	60,222	2,745	58,849	578,111	9.6
80-81.....	0.050282	57,477	2,890	56,032	519,261	9.0
81-82.....	0.055659	54,587	3,038	53,068	463,230	8.5
82-83.....	0.061580	51,548	3,174	49,961	410,162	8.0
83-84.....	0.068134	48,374	3,296	46,726	360,201	7.4
84-85.....	0.076324	45,078	3,441	43,358	313,475	7.0
85-86.....	0.085492	41,638	3,560	39,858	270,117	6.5
86-87.....	0.095363	38,078	3,631	36,262	230,259	6.0
87-88.....	0.106165	34,447	3,657	32,618	193,997	5.6
88-89.....	0.117938	30,790	3,631	28,974	161,378	5.2
89-90.....	0.130712	27,158	3,550	25,383	132,404	4.9
90-91.....	0.144506	23,608	3,412	21,903	107,021	4.5
91-92.....	0.159322	20,197	3,218	18,588	85,118	4.2
92-93.....	0.175148	16,979	2,974	15,492	66,530	3.9
93-94.....	0.191951	14,005	2,688	12,661	51,038	3.6
94-95.....	0.209678	11,317	2,373	10,130	38,377	3.4
95-96.....	0.228256	8,944	2,042	7,923	28,246	3.2
96-97.....	0.247587	6,903	1,709	6,048	20,323	2.9
97-98.....	0.267557	5,194	1,390	4,499	14,275	2.7
98-99.....	0.288030	3,804	1,096	3,256	9,776	2.6
99-100.....	0.308858	2,708	836	2,290	6,520	2.4
100 and over.....	1.000000	1,872	1,872	4,230	4,230	2.3

Table 14. Life table for non-Hispanic white males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table14.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.005601	100,000	560	99,512	7,641,155	76.4
1-2	0.000406	99,440	40	99,420	7,541,644	75.8
2-3	0.000291	99,400	29	99,385	7,442,224	74.9
3-4	0.000242	99,371	24	99,359	7,342,839	73.9
4-5	0.000155	99,347	15	99,339	7,243,480	72.9
5-6	0.000158	99,331	16	99,323	7,144,141	71.9
6-7	0.000141	99,315	14	99,308	7,044,818	70.9
7-8	0.000125	99,301	12	99,295	6,945,510	69.9
8-9	0.000107	99,289	11	99,284	6,846,215	69.0
9-10	0.000088	99,278	9	99,274	6,746,931	68.0
10-11	0.000077	99,270	8	99,266	6,647,657	67.0
11-12	0.000084	99,262	8	99,258	6,548,391	66.0
12-13	0.000122	99,254	12	99,248	6,449,133	65.0
13-14	0.000198	99,242	20	99,232	6,349,885	64.0
14-15	0.000302	99,222	30	99,207	6,250,653	63.0
15-16	0.000409	99,192	41	99,172	6,151,446	62.0
16-17	0.000513	99,151	51	99,126	6,052,275	61.0
17-18	0.000628	99,101	62	99,070	5,953,149	60.1
18-19	0.000757	99,038	75	99,001	5,854,079	59.1
19-20	0.000894	98,963	88	98,919	5,755,078	58.2
20-21	0.001042	98,875	103	98,823	5,656,159	57.2
21-22	0.001182	98,772	117	98,714	5,557,335	56.3
22-23	0.001284	98,655	127	98,592	5,458,622	55.3
23-24	0.001333	98,529	131	98,463	5,360,030	54.4
24-25	0.001343	98,397	132	98,331	5,261,567	53.5
25-26	0.001340	98,265	132	98,199	5,163,236	52.5
26-27	0.001344	98,133	132	98,067	5,065,037	51.6
27-28	0.001350	98,002	132	97,935	4,966,969	50.7
28-29	0.001365	97,869	134	97,802	4,869,034	49.8
29-30	0.001388	97,736	136	97,668	4,771,231	48.8
30-31	0.001416	97,600	138	97,531	4,673,564	47.9
31-32	0.001446	97,462	141	97,391	4,576,033	47.0
32-33	0.001478	97,321	144	97,249	4,478,641	46.0
33-34	0.001513	97,177	147	97,104	4,381,392	45.1
34-35	0.001554	97,030	151	96,955	4,284,289	44.2
35-36	0.001613	96,879	156	96,801	4,187,334	43.2
36-37	0.001690	96,723	163	96,641	4,090,533	42.3
37-38	0.001773	96,560	171	96,474	3,993,892	41.4
38-39	0.001861	96,388	179	96,299	3,897,418	40.4
39-40	0.001963	96,209	189	96,115	3,801,119	39.5
40-41	0.002075	96,020	199	95,921	3,705,005	38.6
41-42	0.002220	95,821	213	95,715	3,609,084	37.7
42-43	0.002426	95,608	232	95,492	3,513,369	36.7
43-44	0.002701	95,376	258	95,248	3,417,877	35.8
44-45	0.003019	95,119	287	94,975	3,322,630	34.9
45-46	0.003346	94,832	317	94,673	3,227,655	34.0
46-47	0.003668	94,514	347	94,341	3,132,982	33.1
47-48	0.004005	94,168	377	93,979	3,038,641	32.3
48-49	0.004363	93,790	409	93,586	2,944,662	31.4
49-50	0.004744	93,381	443	93,160	2,851,076	30.5
50-51	0.005144	92,938	478	92,699	2,757,916	29.7
51-52	0.005560	92,460	514	92,203	2,665,217	28.8
52-53	0.005997	91,946	551	91,670	2,573,014	28.0
53-54	0.006465	91,395	591	91,099	2,481,344	27.1
54-55	0.006968	90,804	633	90,487	2,390,244	26.3
55-56	0.007517	90,171	678	89,832	2,299,757	25.5
56-57	0.008107	89,493	726	89,130	2,209,925	24.7
57-58	0.008721	88,768	774	88,381	2,120,794	23.9
58-59	0.009341	87,994	822	87,583	2,032,413	23.1
59-60	0.009966	87,172	869	86,737	1,944,831	22.3
60-61	0.010613	86,303	916	85,845	1,858,094	21.5
61-62	0.011312	85,387	966	84,904	1,772,249	20.8

Table 14. Life table for non-Hispanic white males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table14.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.012094	84,421	1,021	83,911	1,687,345	20.0
63-64	0.013013	83,400	1,085	82,857	1,603,434	19.2
64-65	0.014099	82,315	1,161	81,734	1,520,577	18.5
65-66	0.015386	81,154	1,249	80,530	1,438,842	17.7
66-67	0.016841	79,906	1,346	79,233	1,358,313	17.0
67-68	0.018373	78,560	1,443	77,838	1,279,080	16.3
68-69	0.019917	77,117	1,536	76,349	1,201,242	15.6
69-70	0.021569	75,581	1,630	74,765	1,124,893	14.9
70-71	0.023381	73,950	1,729	73,086	1,050,128	14.2
71-72	0.025414	72,221	1,835	71,304	977,042	13.5
72-73	0.027782	70,386	1,955	69,408	905,738	12.9
73-74	0.030476	68,430	2,085	67,388	836,330	12.2
74-75	0.033560	66,345	2,227	65,232	768,942	11.6
75-76	0.036825	64,118	2,361	62,938	703,711	11.0
76-77	0.040276	61,757	2,487	60,514	640,773	10.4
77-78	0.044441	59,270	2,634	57,953	580,259	9.8
78-79	0.049066	56,636	2,779	55,246	522,306	9.2
79-80	0.054255	53,857	2,922	52,396	467,060	8.7
80-81	0.060021	50,935	3,057	49,406	414,664	8.1
81-82	0.066623	47,878	3,190	46,283	365,257	7.6
82-83	0.073579	44,688	3,288	43,044	318,974	7.1
83-84	0.080853	41,400	3,347	39,726	275,930	6.7
84-85	0.091608	38,053	3,486	36,310	236,204	6.2
85-86	0.102058	34,567	3,528	32,803	199,894	5.8
86-87	0.113465	31,039	3,522	29,278	167,091	5.4
87-88	0.125863	27,517	3,463	25,785	137,813	5.0
88-89	0.139274	24,054	3,350	22,379	112,028	4.7
89-90	0.153709	20,704	3,182	19,112	89,649	4.3
90-91	0.169159	17,521	2,964	16,039	70,537	4.0
91-92	0.185601	14,557	2,702	13,206	54,497	3.7
92-93	0.202989	11,856	2,407	10,652	41,291	3.5
93-94	0.221256	9,449	2,091	8,404	30,639	3.2
94-95	0.240316	7,358	1,768	6,474	22,235	3.0
95-96	0.260058	5,590	1,454	4,863	15,761	2.8
96-97	0.280356	4,136	1,160	3,556	10,898	2.6
97-98	0.301066	2,977	896	2,529	7,341	2.5
98-99	0.322030	2,080	670	1,745	4,813	2.3
99-100	0.343083	1,411	484	1,169	3,067	2.2
100 and over	1.000000	927	927	1,899	1,899	2.0

Table 15. Life table for non-Hispanic white females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table15.xlsx

	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
Age	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.004697	100,000	470	99,590	8,110,864	81.1
1-2	0.000386	99,530	38	99,511	8,011,274	80.5
2-3	0.000201	99,492	20	99,482	7,911,763	79.5
3-4	0.000167	99,472	17	99,464	7,812,282	78.5
4-5	0.000126	99,455	13	99,449	7,712,818	77.6
5-6	0.000121	99,443	12	99,437	7,613,369	76.6
6-7	0.000110	99,431	11	99,425	7,513,932	75.6
7-8	0.000102	99,420	10	99,415	7,414,507	74.6
8-9	0.000094	99,410	9	99,405	7,315,093	73.6
9-10	0.000086	99,400	9	99,396	7,215,688	72.6
10-11	0.000081	99,392	8	99,388	7,116,292	71.6
11-12	0.000084	99,384	8	99,380	7,016,904	70.6
12-13	0.000100	99,375	10	99,370	6,917,525	69.6
13-14	0.000132	99,365	13	99,359	6,818,154	68.6
14-15	0.000175	99,352	17	99,344	6,718,795	67.6
15-16	0.000221	99,335	22	99,324	6,619,452	66.6
16-17	0.000265	99,313	26	99,300	6,520,128	65.7
17-18	0.000305	99,287	30	99,272	6,420,828	64.7
18-19	0.000341	99,256	34	99,239	6,321,556	63.7
19-20	0.000373	99,223	37	99,204	6,222,317	62.7
20-21	0.000406	99,186	40	99,165	6,123,113	61.7
21-22	0.000440	99,145	44	99,124	6,023,947	60.8
22-23	0.000470	99,102	47	99,078	5,924,824	59.8
23-24	0.000495	99,055	49	99,031	5,825,745	58.8
24-25	0.000517	99,006	51	98,981	5,726,715	57.8
25-26	0.000538	98,955	53	98,928	5,627,734	56.9
26-27	0.000562	98,902	56	98,874	5,528,806	55.9
27-28	0.000587	98,846	58	98,817	5,429,932	54.9
28-29	0.000617	98,788	61	98,758	5,331,114	54.0
29-30	0.000650	98,727	64	98,695	5,232,357	53.0
30-31	0.000691	98,663	68	98,629	5,133,662	52.0
31-32	0.000735	98,595	73	98,559	5,035,033	51.1
32-33	0.000781	98,522	77	98,484	4,936,474	50.1
33-34	0.000826	98,445	81	98,405	4,837,990	49.1
34-35	0.000871	98,364	86	98,321	4,739,586	48.2
35-36	0.000926	98,278	91	98,233	4,641,264	47.2
36-37	0.000991	98,187	97	98,139	4,543,031	46.3
37-38	0.001059	98,090	104	98,038	4,444,893	45.3
38-39	0.001130	97,986	111	97,931	4,346,855	44.4
39-40	0.001209	97,876	118	97,816	4,248,924	43.4
40-41	0.001293	97,757	126	97,694	4,151,107	42.5
41-42	0.001393	97,631	136	97,563	4,053,413	41.5
42-43	0.001525	97,495	149	97,420	3,955,850	40.6
43-44	0.001689	97,346	164	97,264	3,858,430	39.6
44-45	0.001873	97,182	182	97,091	3,761,166	38.7
45-46	0.002057	97,000	200	96,900	3,664,075	37.8
46-47	0.002238	96,800	217	96,692	3,567,175	36.9
47-48	0.002433	96,584	235	96,466	3,470,483	35.9
48-49	0.002647	96,349	255	96,221	3,374,017	35.0
49-50	0.002878	96,094	277	95,955	3,277,796	34.1
50-51	0.003131	95,817	300	95,667	3,181,841	33.2
51-52	0.003389	95,517	324	95,355	3,086,174	32.3
52-53	0.003638	95,193	346	95,020	2,990,819	31.4
53-54	0.003872	94,847	367	94,663	2,895,799	30.5
54-55	0.004106	94,480	388	94,286	2,801,136	29.6
55-56	0.004354	94,092	410	93,887	2,706,850	28.8
56-57	0.004644	93,682	435	93,464	2,612,963	27.9
57-58	0.004995	93,247	466	93,014	2,519,499	27.0
58-59	0.005421	92,781	503	92,530	2,426,485	26.2
59-60	0.005908	92,278	545	92,006	2,333,955	25.3
60-61	0.006438	91,733	591	91,438	2,241,949	24.4
61-62	0.007000	91,142	638	90,823	2,150,512	23.6

Table 15. Life table for non-Hispanic white females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table15.xlsx

	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
Age	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63.....	0.007610	90,504	689	90,160	2,059,688	22.8
63-64.....	0.008291	89,816	745	89,443	1,969,528	21.9
64-65.....	0.009067	89,071	808	88,667	1,880,085	21.1
65-66.....	0.009990	88,264	882	87,823	1,791,417	20.3
66-67.....	0.011046	87,382	965	86,899	1,703,595	19.5
67-68.....	0.012155	86,417	1,050	85,891	1,616,695	18.7
68-69.....	0.013274	85,366	1,133	84,800	1,530,804	17.9
69-70.....	0.014462	84,233	1,218	83,624	1,446,005	17.2
70-71.....	0.015809	83,015	1,312	82,359	1,362,381	16.4
71-72.....	0.017396	81,702	1,421	80,992	1,280,022	15.7
72-73.....	0.019142	80,281	1,537	79,513	1,199,031	14.9
73-74.....	0.021118	78,744	1,663	77,913	1,119,518	14.2
74-75.....	0.023333	77,081	1,799	76,182	1,041,605	13.5
75-76.....	0.025789	75,283	1,941	74,312	965,423	12.8
76-77.....	0.028476	73,341	2,088	72,297	891,111	12.2
77-78.....	0.031585	71,253	2,251	70,128	818,814	11.5
78-79.....	0.035156	69,002	2,426	67,789	748,686	10.9
79-80.....	0.039006	66,577	2,597	65,278	680,897	10.2
80-81.....	0.043118	63,980	2,759	62,600	615,619	9.6
81-82.....	0.047862	61,221	2,930	59,756	553,018	9.0
82-83.....	0.053338	58,291	3,109	56,736	493,262	8.5
83-84.....	0.059726	55,182	3,296	53,534	436,526	7.9
84-85.....	0.067468	51,886	3,501	50,136	382,992	7.4
85-86.....	0.075744	48,385	3,665	46,553	332,857	6.9
86-87.....	0.085144	44,720	3,808	42,817	286,304	6.4
87-88.....	0.095522	40,913	3,908	38,959	243,487	6.0
88-89.....	0.106932	37,005	3,957	35,026	204,529	5.5
89-90.....	0.119420	33,048	3,947	31,074	169,503	5.1
90-91.....	0.133019	29,101	3,871	27,166	138,428	4.8
91-92.....	0.147750	25,230	3,728	23,366	111,263	4.4
92-93.....	0.163611	21,502	3,518	19,743	87,896	4.1
93-94.....	0.180583	17,984	3,248	16,361	68,153	3.8
94-95.....	0.198619	14,737	2,927	13,273	51,793	3.5
95-96.....	0.217651	11,810	2,570	10,524	38,519	3.3
96-97.....	0.237581	9,239	2,195	8,142	27,995	3.0
97-98.....	0.258286	7,044	1,819	6,134	19,853	2.8
98-99.....	0.279620	5,225	1,461	4,494	13,719	2.6
99-100.....	0.301415	3,764	1,134	3,197	9,224	2.5
100 and over.....	1.000000	2,629	2,629	6,028	6,028	2.3

Table 16. Life table for the non-Hispanic black population: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table16.xlsx

	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
Age	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.011411	100,000	1,141	99,004	7,472,031	74.7
1-2	0.000690	98,859	68	98,825	7,373,028	74.6
2-3	0.000448	98,791	44	98,769	7,274,203	73.6
3-4	0.000288	98,746	28	98,732	7,175,434	72.7
4-5	0.000234	98,718	23	98,707	7,076,702	71.7
5-6	0.000211	98,695	21	98,685	6,977,995	70.7
6-7	0.000183	98,674	18	98,665	6,879,311	69.7
7-8	0.000161	98,656	16	98,648	6,780,646	68.7
8-9	0.000139	98,640	14	98,633	6,681,998	67.7
9-10	0.000120	98,626	12	98,621	6,583,364	66.8
10-11	0.000109	98,615	11	98,609	6,484,744	65.8
11-12	0.000120	98,604	12	98,598	6,386,134	64.8
12-13	0.000167	98,592	16	98,584	6,287,536	63.8
13-14	0.000255	98,576	25	98,563	6,188,952	62.8
14-15	0.000368	98,551	36	98,533	6,090,389	61.8
15-16	0.000482	98,514	47	98,491	5,991,856	60.8
16-17	0.000589	98,467	58	98,438	5,893,366	59.9
17-18	0.000698	98,409	69	98,375	5,794,928	58.9
18-19	0.000815	98,340	80	98,300	5,696,553	57.9
19-20	0.000941	98,260	92	98,214	5,598,253	57.0
20-21	0.001085	98,168	107	98,114	5,500,039	56.0
21-22	0.001229	98,061	121	98,001	5,401,925	55.1
22-23	0.001344	97,941	132	97,875	5,303,924	54.2
23-24	0.001407	97,809	138	97,740	5,206,049	53.2
24-25	0.001430	97,671	140	97,602	5,108,309	52.3
25-26	0.001440	97,532	140	97,462	5,010,707	51.4
26-27	0.001460	97,391	142	97,320	4,913,246	50.4
27-28	0.001486	97,249	144	97,177	4,815,925	49.5
28-29	0.001527	97,105	148	97,031	4,718,748	48.6
29-30	0.001580	96,956	153	96,880	4,621,718	47.7
30-31	0.001638	96,803	159	96,724	4,524,838	46.7
31-32	0.001696	96,645	164	96,563	4,428,114	45.8
32-33	0.001758	96,481	170	96,396	4,331,551	44.9
33-34	0.001822	96,311	175	96,223	4,235,155	44.0
34-35	0.001892	96,136	182	96,045	4,138,932	43.1
35-36	0.001978	95,954	190	95,859	4,042,887	42.1
36-37	0.002079	95,764	199	95,664	3,947,028	41.2
37-38	0.002189	95,565	209	95,460	3,851,364	40.3
38-39	0.002308	95,356	220	95,246	3,755,904	39.4
39-40	0.002441	95,136	232	95,019	3,660,658	38.5
40-41	0.002592	94,903	246	94,780	3,565,639	37.6
41-42	0.002774	94,657	263	94,526	3,470,859	36.7
42-43	0.003004	94,395	284	94,253	3,376,333	35.8
43-44	0.003284	94,111	309	93,957	3,282,080	34.9
44-45	0.003604	93,802	338	93,633	3,188,123	34.0
45-46	0.003932	93,464	368	93,280	3,094,490	33.1
46-47	0.004277	93,096	398	92,897	3,001,210	32.2
47-48	0.004680	92,698	434	92,481	2,908,313	31.4
48-49	0.005159	92,264	476	92,026	2,815,832	30.5
49-50	0.005704	91,788	524	91,527	2,723,805	29.7
50-51	0.006279	91,265	573	90,978	2,632,279	28.8
51-52	0.006866	90,692	623	90,380	2,541,300	28.0
52-53	0.007497	90,069	675	89,732	2,450,920	27.2
53-54	0.008185	89,394	732	89,028	2,361,188	26.4
54-55	0.008937	88,662	792	88,266	2,272,160	25.6
55-56	0.009773	87,870	859	87,441	2,183,894	24.9
56-57	0.010664	87,011	928	86,547	2,096,454	24.1
57-58	0.011546	86,083	994	85,586	2,009,906	23.3
58-59	0.012366	85,089	1,052	84,563	1,924,320	22.6
59-60	0.013138	84,037	1,104	83,485	1,839,757	21.9
60-61	0.013945	82,933	1,156	82,355	1,756,272	21.2
61-62	0.014834	81,777	1,213	81,170	1,673,917	20.5
62-63	0.015767	80,563	1,270	79,928	1,592,747	19.8

Table 16. Life table for the non-Hispanic black population: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table16.xlsx

	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
Age	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
63-64.....	0.016762	79,293	1,329	78,629	1,512,819	19.1
64-65.....	0.017850	77,964	1,392	77,268	1,434,190	18.4
65-66.....	0.019064	76,572	1,460	75,842	1,356,922	17.7
66-67.....	0.020433	75,113	1,535	74,345	1,281,079	17.1
67-68.....	0.021927	73,578	1,613	72,771	1,206,734	16.4
68-69.....	0.023523	71,964	1,693	71,118	1,133,963	15.8
69-70.....	0.025217	70,272	1,772	69,386	1,062,845	15.1
70-71.....	0.026986	68,500	1,849	67,575	993,460	14.5
71-72.....	0.028847	66,651	1,923	65,690	925,884	13.9
72-73.....	0.031022	64,728	2,008	63,724	860,195	13.3
73-74.....	0.033520	62,720	2,102	61,669	796,470	12.7
74-75.....	0.036005	60,618	2,183	59,527	734,801	12.1
75-76.....	0.038873	58,435	2,272	57,300	675,274	11.6
76-77.....	0.042102	56,164	2,365	54,982	617,975	11.0
77-78.....	0.045508	53,799	2,448	52,575	562,993	10.5
78-79.....	0.049151	51,351	2,524	50,089	510,418	9.9
79-80.....	0.053558	48,827	2,615	47,519	460,329	9.4
80-81.....	0.058981	46,212	2,726	44,849	412,810	8.9
81-82.....	0.063825	43,486	2,776	42,099	367,961	8.5
82-83.....	0.068789	40,711	2,800	39,311	325,862	8.0
83-84.....	0.075070	37,910	2,846	36,487	286,551	7.6
84-85.....	0.082615	35,064	2,897	33,616	250,064	7.1
85-86.....	0.091393	32,168	2,940	30,698	216,448	6.7
86-87.....	0.099184	29,228	2,899	27,778	185,751	6.4
87-88.....	0.107515	26,329	2,831	24,913	157,972	6.0
88-89.....	0.116403	23,498	2,735	22,130	133,059	5.7
89-90.....	0.125860	20,763	2,613	19,456	110,929	5.3
90-91.....	0.135895	18,150	2,466	16,916	91,473	5.0
91-92.....	0.146514	15,683	2,298	14,534	74,556	4.8
92-93.....	0.157716	13,385	2,111	12,330	60,022	4.5
93-94.....	0.169495	11,274	1,911	10,319	47,692	4.2
94-95.....	0.181840	9,363	1,703	8,512	37,373	4.0
95-96.....	0.194732	7,661	1,492	6,915	28,861	3.8
96-97.....	0.208145	6,169	1,284	5,527	21,947	3.6
97-98.....	0.222048	4,885	1,085	4,343	16,420	3.4
98-99.....	0.236400	3,800	898	3,351	12,077	3.2
99-100.....	0.251156	2,902	729	2,537	8,726	3.0
100 and over.....	1.000000	2,173	2,173	6,189	6,189	2.8

Table 17. Life table for non-Hispanic black males: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table17.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.012496	100,000	1,250	98,919	7,142,761	71.4
1-2	0.000731	98,750	72	98,714	7,043,842	71.3
2-3	0.000514	98,678	51	98,653	6,945,127	70.4
3-4	0.000341	98,628	34	98,611	6,846,474	69.4
4-5	0.000256	98,594	25	98,581	6,747,864	68.4
5-6	0.000239	98,569	24	98,557	6,649,282	67.5
6-7	0.000211	98,545	21	98,535	6,550,725	66.5
7-8	0.000186	98,524	18	98,515	6,452,190	65.5
8-9	0.000151	98,506	15	98,499	6,353,675	64.5
9-10	0.000111	98,491	11	98,486	6,255,177	63.5
10-11	0.000080	98,480	8	98,476	6,156,691	62.5
11-12	0.000085	98,472	8	98,468	6,058,215	61.5
12-13	0.000158	98,464	16	98,456	5,959,746	60.5
13-14	0.000310	98,448	30	98,433	5,861,290	59.5
14-15	0.000509	98,418	50	98,393	5,762,857	58.6
15-16	0.000711	98,368	70	98,333	5,664,464	57.6
16-17	0.000894	98,298	88	98,254	5,566,131	56.6
17-18	0.001075	98,210	106	98,157	5,467,877	55.7
18-19	0.001261	98,105	124	98,043	5,369,719	54.7
19-20	0.001458	97,981	143	97,909	5,271,677	53.8
20-21	0.001684	97,838	165	97,756	5,173,767	52.9
21-22	0.001913	97,673	187	97,580	5,076,012	52.0
22-23	0.002088	97,486	204	97,385	4,978,432	51.1
23-24	0.002174	97,283	211	97,177	4,881,047	50.2
24-25	0.002185	97,071	212	96,965	4,783,870	49.3
25-26	0.002168	96,859	210	96,754	4,686,905	48.4
26-27	0.002163	96,649	209	96,545	4,590,151	47.5
27-28	0.002171	96,440	209	96,336	4,493,606	46.6
28-29	0.002209	96,231	213	96,125	4,397,270	45.7
29-30	0.002271	96,018	218	95,909	4,301,146	44.8
30-31	0.002339	95,800	224	95,688	4,205,237	43.9
31-32	0.002398	95,576	229	95,461	4,109,548	43.0
32-33	0.002450	95,347	234	95,230	4,014,087	42.1
33-34	0.002490	95,113	237	94,995	3,918,857	41.2
34-35	0.002526	94,876	240	94,757	3,823,862	40.3
35-36	0.002578	94,637	244	94,515	3,729,105	39.4
36-37	0.002653	94,393	250	94,268	3,634,591	38.5
37-38	0.002745	94,142	258	94,013	3,540,323	37.6
38-39	0.002856	93,884	268	93,750	3,446,310	36.7
39-40	0.002993	93,616	280	93,476	3,352,560	35.8
40-41	0.003153	93,336	294	93,189	3,259,084	34.9
41-42	0.003353	93,041	312	92,885	3,165,896	34.0
42-43	0.003615	92,729	335	92,562	3,073,011	33.1
43-44	0.003946	92,394	365	92,212	2,980,449	32.3
44-45	0.004333	92,030	399	91,830	2,888,237	31.4
45-46	0.004737	91,631	434	91,414	2,796,407	30.5
46-47	0.005167	91,197	471	90,961	2,704,993	29.7
47-48	0.005668	90,726	514	90,469	2,614,032	28.8
48-49	0.006261	90,211	565	89,929	2,523,563	28.0
49-50	0.006938	89,647	622	89,336	2,433,634	27.1
50-51	0.007647	89,025	681	88,684	2,344,299	26.3
51-52	0.008381	88,344	740	87,974	2,255,614	25.5
52-53	0.009205	87,603	806	87,200	2,167,641	24.7
53-54	0.010154	86,797	881	86,356	2,080,440	24.0
54-55	0.011230	85,916	965	85,433	1,994,084	23.2
55-56	0.012448	84,951	1,057	84,422	1,908,650	22.5
56-57	0.013738	83,894	1,153	83,317	1,824,228	21.7
57-58	0.015002	82,741	1,241	82,120	1,740,911	21.0
58-59	0.016138	81,500	1,315	80,842	1,658,791	20.4
59-60	0.017160	80,184	1,376	79,496	1,577,949	19.7
60-61	0.018218	78,808	1,436	78,091	1,498,452	19.0
61-62	0.019383	77,373	1,500	76,623	1,420,362	18.4

Table 17. Life table for non-Hispanic black males: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table17.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.020559	75,873	1,560	75,093	1,343,739	17.7
63-64	0.021758	74,313	1,617	73,505	1,268,646	17.1
64-65	0.023024	72,696	1,674	71,859	1,195,141	16.4
65-66	0.024404	71,022	1,733	70,156	1,123,281	15.8
66-67	0.025975	69,289	1,800	68,389	1,053,126	15.2
67-68	0.027718	67,489	1,871	66,554	984,736	14.6
68-69	0.029661	65,619	1,946	64,646	918,182	14.0
69-70	0.031809	63,672	2,025	62,660	853,536	13.4
70-71	0.034018	61,647	2,097	60,599	790,877	12.8
71-72	0.036295	59,550	2,161	58,469	730,278	12.3
72-73	0.039034	57,389	2,240	56,269	671,809	11.7
73-74	0.042198	55,149	2,327	53,985	615,540	11.2
74-75	0.045540	52,821	2,406	51,619	561,555	10.6
75-76	0.049361	50,416	2,489	49,172	509,937	10.1
76-77	0.053735	47,927	2,575	46,640	460,765	9.6
77-78	0.057941	45,352	2,628	44,038	414,126	9.1
78-79	0.062216	42,724	2,658	41,395	370,088	8.7
79-80	0.067923	40,066	2,721	38,705	328,693	8.2
80-81	0.074520	37,345	2,783	35,953	289,987	7.8
81-82	0.080399	34,562	2,779	33,172	254,034	7.4
82-83	0.087986	31,783	2,796	30,385	220,862	6.9
83-84	0.095363	28,986	2,764	27,604	190,477	6.6
84-85	0.103247	26,222	2,707	24,869	162,873	6.2
85-86	0.111655	23,515	2,626	22,202	138,004	5.9
86-87	0.120602	20,889	2,519	19,630	115,802	5.5
87-88	0.130098	18,370	2,390	17,175	96,172	5.2
88-89	0.140149	15,980	2,240	14,860	78,997	4.9
89-90	0.150759	13,741	2,072	12,705	64,137	4.7
90-91	0.161925	11,669	1,890	10,724	51,432	4.4
91-92	0.173639	9,780	1,698	8,930	40,708	4.2
92-93	0.185889	8,081	1,502	7,330	31,777	3.9
93-94	0.198655	6,579	1,307	5,926	24,447	3.7
94-95	0.211912	5,272	1,117	4,714	18,522	3.5
95-96	0.225626	4,155	937	3,686	13,808	3.3
96-97	0.239760	3,217	771	2,832	10,122	3.1
97-98	0.254269	2,446	622	2,135	7,290	3.0
98-99	0.269102	1,824	491	1,579	5,155	2.8
99-100	0.284205	1,333	379	1,144	3,576	2.7
100 and over	1.000000	954	954	2,432	2,432	2.5

Table 18. Life table for non-Hispanic black females: United States, 2010Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table18.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
0-1	0.010285	100,000	1,029	99,092	7,771,599	77.7
1-2	0.000621	98,971	61	98,941	7,672,507	77.5
2-3	0.000362	98,910	36	98,892	7,573,566	76.6
3-4	0.000221	98,874	22	98,863	7,474,674	75.6
4-5	0.000202	98,852	20	98,842	7,375,811	74.6
5-6	0.000175	98,832	17	98,824	7,276,968	73.6
6-7	0.000147	98,815	15	98,808	7,178,145	72.6
7-8	0.000129	98,801	13	98,794	7,079,337	71.7
8-9	0.000121	98,788	12	98,782	6,980,542	70.7
9-10	0.000122	98,776	12	98,770	6,881,761	69.7
10-11	0.000130	98,764	13	98,757	6,782,991	68.7
11-12	0.000146	98,751	14	98,744	6,684,233	67.7
12-13	0.000166	98,737	16	98,728	6,585,490	66.7
13-14	0.000189	98,720	19	98,711	6,486,761	65.7
14-15	0.000215	98,702	21	98,691	6,388,051	64.7
15-16	0.000242	98,680	24	98,668	6,289,360	63.7
16-17	0.000272	98,656	27	98,643	6,190,691	62.8
17-18	0.000309	98,630	30	98,614	6,092,048	61.8
18-19	0.000357	98,599	35	98,582	5,993,434	60.8
19-20	0.000416	98,564	41	98,543	5,894,852	59.8
20-21	0.000484	98,523	48	98,499	5,796,309	58.8
21-22	0.000554	98,475	55	98,448	5,697,810	57.9
22-23	0.000618	98,421	61	98,390	5,599,362	56.9
23-24	0.000669	98,360	66	98,327	5,500,972	55.9
24-25	0.000710	98,294	70	98,259	5,402,645	55.0
25-26	0.000754	98,224	74	98,187	5,304,386	54.0
26-27	0.000805	98,150	79	98,111	5,206,198	53.0
27-28	0.000854	98,071	84	98,029	5,108,088	52.1
28-29	0.000902	97,987	88	97,943	5,010,058	51.1
29-30	0.000951	97,899	93	97,853	4,912,115	50.2
30-31	0.001002	97,806	98	97,757	4,814,263	49.2
31-32	0.001062	97,708	104	97,656	4,716,506	48.3
32-33	0.001135	97,604	111	97,549	4,618,850	47.3
33-34	0.001224	97,493	119	97,434	4,521,301	46.4
34-35	0.001327	97,374	129	97,309	4,423,867	45.4
35-36	0.001446	97,245	141	97,175	4,326,558	44.5
36-37	0.001572	97,104	153	97,028	4,229,383	43.6
37-38	0.001698	96,952	165	96,869	4,132,355	42.6
38-39	0.001822	96,787	176	96,699	4,035,486	41.7
39-40	0.001951	96,611	188	96,516	3,938,787	40.8
40-41	0.002091	96,422	202	96,321	3,842,271	39.8
41-42	0.002255	96,221	217	96,112	3,745,949	38.9
42-43	0.002454	96,004	236	95,886	3,649,837	38.0
43-44	0.002690	95,768	258	95,639	3,553,952	37.1
44-45	0.002953	95,510	282	95,369	3,458,312	36.2
45-46	0.003216	95,228	306	95,075	3,362,943	35.3
46-47	0.003488	94,922	331	94,757	3,267,868	34.4
47-48	0.003806	94,591	360	94,411	3,173,111	33.5
48-49	0.004185	94,231	394	94,034	3,078,700	32.7
49-50	0.004615	93,837	433	93,620	2,984,666	31.8
50-51	0.005073	93,404	474	93,167	2,891,046	31.0
51-52	0.005534	92,930	514	92,673	2,797,879	30.1
52-53	0.005999	92,416	554	92,138	2,705,207	29.3
53-54	0.006467	91,861	594	91,564	2,613,069	28.4
54-55	0.006949	91,267	634	90,950	2,521,504	27.6
55-56	0.007476	90,633	678	90,294	2,430,554	26.8
56-57	0.008047	89,955	724	89,593	2,340,260	26.0
57-58	0.008629	89,231	770	88,846	2,250,667	25.2
58-59	0.009204	88,461	814	88,054	2,161,820	24.4
59-60	0.009783	87,647	857	87,219	2,073,766	23.7
60-61	0.010397	86,790	902	86,339	1,986,548	22.9
61-62	0.011080	85,887	952	85,412	1,900,209	22.1

Table 18. Life table for non-Hispanic black females: United States, 2010—Con.Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/63_07/Table18.xlsx

Age	Probability of dying between ages x to x+1	Number surviving to age x	Number dying between ages x to x+1	Person-years lived between ages x to x+1	Total number of person-years lived above age x	Expectation of life at age x
	q(x)	l(x)	d(x)	L(x)	T(x)	e(x)
62-63	0.011840	84,936	1,006	84,433	1,814,797	21.4
63-64	0.012704	83,930	1,066	83,397	1,730,364	20.6
64-65	0.013692	82,864	1,135	82,297	1,646,967	19.9
65-66	0.014826	81,729	1,212	81,123	1,564,671	19.1
66-67	0.016091	80,518	1,296	79,870	1,483,547	18.4
67-68	0.017446	79,222	1,382	78,531	1,403,678	17.7
68-69	0.018830	77,840	1,466	77,107	1,325,147	17.0
69-70	0.020239	76,374	1,546	75,601	1,248,039	16.3
70-71	0.021737	74,829	1,627	74,015	1,172,438	15.7
71-72	0.023355	73,202	1,710	72,347	1,098,423	15.0
72-73	0.025195	71,492	1,801	70,592	1,026,076	14.4
73-74	0.027331	69,691	1,905	68,739	955,484	13.7
74-75	0.029367	67,786	1,991	66,791	886,745	13.1
75-76	0.031736	65,796	2,088	64,752	819,954	12.5
76-77	0.034391	63,708	2,191	62,612	755,203	11.9
77-78	0.037506	61,517	2,307	60,363	692,591	11.3
78-79	0.041016	59,209	2,429	57,995	632,228	10.7
79-80	0.044921	56,781	2,551	55,506	574,232	10.1
80-81	0.049945	54,230	2,709	52,876	518,727	9.6
81-82	0.054570	51,522	2,812	50,116	465,851	9.0
82-83	0.059314	48,710	2,889	47,266	415,735	8.5
83-84	0.065399	45,821	2,997	44,323	368,470	8.0
84-85	0.072879	42,824	3,121	41,264	324,147	7.6
85-86	0.080679	39,703	3,203	38,102	282,883	7.1
86-87	0.088415	36,500	3,227	34,887	244,781	6.7
87-88	0.096769	33,273	3,220	31,663	209,895	6.3
88-89	0.105768	30,053	3,179	28,464	178,232	5.9
89-90	0.115435	26,874	3,102	25,323	149,768	5.6
90-91	0.125787	23,772	2,990	22,277	124,445	5.2
91-92	0.136837	20,782	2,844	19,360	102,168	4.9
92-93	0.148591	17,938	2,665	16,606	82,807	4.6
93-94	0.161047	15,273	2,460	14,043	66,202	4.3
94-95	0.174197	12,813	2,232	11,697	52,159	4.1
95-96	0.188022	10,581	1,989	9,586	40,462	3.8
96-97	0.202492	8,592	1,740	7,722	30,875	3.6
97-98	0.217570	6,852	1,491	6,107	23,154	3.4
98-99	0.233206	5,361	1,250	4,736	17,047	3.2
99-100	0.249342	4,111	1,025	3,598	12,311	3.0
100 and over	1.000000	3,086	3,086	8,713	8,713	2.8

Table 19. Estimated life expectancy at birth in years, by race, Hispanic origin and sex: Death-registration States, 1900-28, and United States, 1929-2010

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

Area and year	All races and origins			White			Black ¹			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
UNITED STATES ²																		
2010 ³	78.7	76.2	81.0	78.9	76.5	81.3	75.1	71.8	78.0	81.2	78.7	83.8	78.8	76.4	81.1	74.7	71.4	77.7
2009 ^{3,4}	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	81.1	74.3	70.9	77.4
2008 ^{3,4}	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 ^{3,4}	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 ^{3,4}	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 ^{3,4}	77.6	75.0	80.1	78.0	75.5	80.5	73.0	69.5	76.2	---	---	---	---	---	---	---	---	---
2004 ^{3,4}	77.6	75.0	80.1	78.1	75.5	80.5	72.9	69.4	76.1	---	---	---	---	---	---	---	---	---
2003 ^{3,4}	77.2	74.5	79.7	77.7	75.1	80.2	72.4	68.9	75.7	---	---	---	---	---	---	---	---	---
2002 ^{3,4}	77.0	74.4	79.6	77.5	74.9	80.1	72.2	68.7	75.4	---	---	---	---	---	---	---	---	---
2001 ^{3,4}	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	77.2	74.3	79.9	71.1	67.2	74.7	---	---	---	---	---	---	---	---	---
1996	76.1	73.1	79.1	76.8	73.9	79.7	70.2	66.1	74.2	---	---	---	---	---	---	---	---	---
1995	75.8	72.5	78.9	76.5	73.4	79.6	69.6	65.2	73.9	---	---	---	---	---	---	---	---	---
1994	75.7	72.4	79.0	76.5	73.3	79.6	69.5	64.9	73.9	---	---	---	---	---	---	---	---	---
1993	75.5	72.2	78.8	76.3	73.1	79.5	69.2	64.6	73.7	---	---	---	---	---	---	---	---	---
1992	75.8	72.3	79.1	76.5	73.2	79.8	69.6	65.0	73.9	---	---	---	---	---	---	---	---	---
1991	75.5	72.0	78.9	76.3	72.9	79.6	69.3	64.6	73.8	---	---	---	---	---	---	---	---	---
1990	75.4	71.8	78.8	76.1	72.7	79.4	69.1	64.5	73.6	---	---	---	---	---	---	---	---	---
1989	75.1	71.7	78.5	75.9	72.5	79.2	68.8	64.3	73.3	---	---	---	---	---	---	---	---	---
1988	74.9	71.4	78.3	75.6	72.2	78.9	68.9	64.4	73.2	---	---	---	---	---	---	---	---	---
1987	74.9	71.4	78.3	75.6	72.1	78.9	69.1	64.7	73.4	---	---	---	---	---	---	---	---	---
1986	74.7	71.2	78.2	75.4	71.9	78.8	69.1	64.8	73.4	---	---	---	---	---	---	---	---	---
1985	74.7	71.1	78.2	75.3	71.8	78.7	69.3	65.0	73.4	---	---	---	---	---	---	---	---	---
1984	74.7	71.1	78.2	75.3	71.8	78.7	69.5	65.3	73.6	---	---	---	---	---	---	---	---	---
1983	74.6	71.0	78.1	75.2	71.6	78.7	69.4	65.2	73.5	---	---	---	---	---	---	---	---	---
1982	74.5	70.8	78.1	75.1	71.5	78.7	69.4	65.1	73.6	---	---	---	---	---	---	---	---	---
1981	74.1	70.4	77.8	74.8	71.1	78.4	68.9	64.5	73.2	---	---	---	---	---	---	---	---	---
1980	73.7	70.0	77.4	74.4	70.7	78.1	68.1	63.8	72.5	---	---	---	---	---	---	---	---	---
1979	73.9	70.0	77.8	74.6	70.8	78.4	68.5	64.0	72.9	---	---	---	---	---	---	---	---	---
1978	73.5	69.6	77.3	74.1	70.4	78.0	68.1	63.7	72.4	---	---	---	---	---	---	---	---	---
1977	73.3	69.5	77.2	74.0	70.2	77.9	67.7	63.4	72.0	---	---	---	---	---	---	---	---	---
1976	72.9	69.1	76.8	73.6	69.9	77.5	67.2	62.9	71.6	---	---	---	---	---	---	---	---	---
1975	72.6	68.8	76.6	73.4	69.5	77.3	66.8	62.4	71.3	---	---	---	---	---	---	---	---	---
1974	72.0	68.2	75.9	72.8	69.0	76.7	66.0	61.7	70.3	---	---	---	---	---	---	---	---	---
1973	71.4	67.6	75.3	72.2	68.5	76.1	65.0	60.9	69.3	---	---	---	---	---	---	---	---	---
1972 ⁵	71.2	67.4	75.1	72.0	68.3	75.9	64.7	60.4	69.1	---	---	---	---	---	---	---	---	---
1971	71.1	67.4	75.0	72.0	68.3	75.8	64.6	60.5	68.9	---	---	---	---	---	---	---	---	---
1970	70.8	67.1	74.7	71.7	68.0	75.6	64.1	60.0	68.3	---	---	---	---	---	---	---	---	---
1969	70.5	66.8	74.4	71.4	67.7	75.3	64.5	60.6	68.6	---	---	---	---	---	---	---	---	---
1968	70.2	66.6	74.1	71.1	67.5	75.0	64.1	60.4	67.9	---	---	---	---	---	---	---	---	---
1967	70.5	67.0	74.3	71.4	67.8	75.2	64.9	61.4	68.5	---	---	---	---	---	---	---	---	---
1966	70.2	66.7	73.9	71.1	67.5	74.8	64.2	60.9	67.6	---	---	---	---	---	---	---	---	---
1965	70.2	66.8	73.8	71.1	67.6	74.8	64.3	61.2	67.6	---	---	---	---	---	---	---	---	---
1964	70.2	66.8	73.7	71.0	67.7	74.7	64.2	61.3	67.3	---	---	---	---	---	---	---	---	---
1963 ⁶	69.9	66.6	73.4	70.8	67.4	74.4	63.7	61.0	66.6	---	---	---	---	---	---	---	---	---
1962 ⁶	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	---	---	---	---	---	---	---	---	---

Table 19. Estimated life expectancy at birth in years, by race, Hispanic origin and sex: Death-registration States, 1900-28, and United States, 1929-2010—Con.

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

Area and year	All races and origins			White			Black ¹			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
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	---	---	---	---	---	---	---	---	---

See footnotes at end of table

DEATH-REGISTRATION STATES

1928.....	56.8	55.6	58.3	58.4	57.0	60.0	46.3	45.6	47.0	---	---	---	---	---	---	---	---	---
1927.....	60.4	59.0	62.1	62.0	60.5	63.9	48.2	47.6	48.9	---	---	---	---	---	---	---	---	---
1926.....	56.7	55.5	58.0	58.2	57.0	59.6	44.6	43.7	45.6	---	---	---	---	---	---	---	---	---
1925.....	59.0	57.6	60.6	60.7	59.3	62.4	45.7	44.9	46.7	---	---	---	---	---	---	---	---	---
1924.....	59.7	58.1	61.5	61.4	59.8	63.4	46.6	45.5	47.8	---	---	---	---	---	---	---	---	---
1923.....	57.2	56.1	58.5	58.3	57.1	59.6	48.3	47.7	48.9	---	---	---	---	---	---	---	---	---
1922.....	59.6	58.4	61.0	60.4	59.1	61.9	52.4	51.8	53.0	---	---	---	---	---	---	---	---	---
1921.....	60.8	60.0	61.8	61.8	60.8	62.9	51.5	51.6	51.3	---	---	---	---	---	---	---	---	---
1920.....	54.1	53.6	54.6	54.9	54.4	55.6	45.3	45.5	45.2	---	---	---	---	---	---	---	---	---
1919.....	54.7	53.5	56.0	55.8	54.5	57.4	44.5	44.5	44.4	---	---	---	---	---	---	---	---	---
1918.....	39.1	36.6	42.2	39.8	37.1	43.2	31.1	29.9	32.5	---	---	---	---	---	---	---	---	---
1917.....	50.9	48.4	54.0	52.0	49.3	55.3	38.8	37.0	40.8	---	---	---	---	---	---	---	---	---
1916.....	51.7	49.6	54.3	52.5	50.2	55.2	41.3	39.6	43.1	---	---	---	---	---	---	---	---	---
1915.....	54.5	52.5	56.8	55.1	53.1	57.5	38.9	37.5	40.5	---	---	---	---	---	---	---	---	---
1914.....	54.2	52.0	56.8	54.9	52.7	57.5	38.9	37.1	40.8	---	---	---	---	---	---	---	---	---
1913.....	52.5	50.3	55.0	53.0	50.8	55.7	38.4	36.7	40.3	---	---	---	---	---	---	---	---	---
1912.....	53.5	51.5	55.9	53.9	51.9	56.2	37.9	35.9	40.0	---	---	---	---	---	---	---	---	---
1911.....	52.6	50.9	54.4	53.0	51.3	54.9	36.4	34.6	38.2	---	---	---	---	---	---	---	---	---
1910.....	50.0	48.4	51.8	50.3	48.6	52.0	35.6	33.8	37.5	---	---	---	---	---	---	---	---	---
1909.....	52.1	50.5	53.8	52.5	50.9	54.2	35.7	34.2	37.3	---	---	---	---	---	---	---	---	---
1908.....	51.1	49.5	52.8	51.5	49.9	53.3	34.9	33.8	36.0	---	---	---	---	---	---	---	---	---
1907.....	47.6	45.6	49.9	48.1	46.0	50.4	32.5	31.1	34.0	---	---	---	---	---	---	---	---	---
1906.....	48.7	46.9	50.8	49.3	47.3	51.4	32.9	31.8	33.9	---	---	---	---	---	---	---	---	---
1905.....	48.7	47.3	50.2	49.1	47.6	50.6	31.3	29.6	33.1	---	---	---	---	---	---	---	---	---
1904.....	47.6	46.2	49.1	48.0	46.6	49.5	30.8	29.1	32.7	---	---	---	---	---	---	---	---	---
1903.....	50.5	49.1	52.0	50.9	49.5	52.5	33.1	31.7	34.6	---	---	---	---	---	---	---	---	---
1902.....	51.5	49.8	53.4	51.9	50.2	53.8	34.6	32.9	36.4	---	---	---	---	---	---	---	---	---
1901.....	49.1	47.6	50.6	49.4	48.0	51.0	33.7	32.2	35.3	---	---	---	---	---	---	---	---	---
1900.....	47.3	46.3	48.3	47.6	46.6	48.7	33.0	32.5	33.5	---	---	---	---	---	---	---	---	---

--- Data not available

¹Prior to 1970, data for the black population are not available. Data shown for 1900-1969 are for the non-white population. See Technical notes.

²Alaska included in 1959 and Hawaii included in 1960

³Life expectancies for 2001-2010 were calculated using a revised methodology described in the Technical notes.

⁴Life expectancies for 2001-2009 have been re-estimated using new intercensal population estimates and may differ from data previously published; see Technical Notes.

⁵Deaths based on a 50-percent sample.

⁶Figures by race exclude data for residents of New Jersey; see Technical notes.

Table 20. Survivorship by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Number of survivors out of 100,000 born alive (lx)											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	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.....	99,388	99,305	99,064	98,740	97,998	97,407	97,024	95,290	94,028	92,515	88,538	87,552
5.....	99,281	99,176	98,877	98,495	97,668	96,998	96,482	94,220	91,978	83,389	83,887	81,804
10.....	99,224	99,097	98,766	98,347	97,460	96,765	96,177	93,710	91,106	88,129	82,458	80,052
15.....	99,154	98,998	98,635	98,196	97,261	96,551	95,885	93,235	90,385	87,144	81,506	78,963
20.....	98,910	98,664	98,215	97,741	96,716	96,111	95,366	92,435	89,089	85,441	80,074	77,239
25.....	98,483	98,203	97,671	97,110	96,000	95,517	94,676	91,335	87,269	83,146	78,046	74,768
30.....	98,011	97,751	97,070	96,477	95,307	94,905	93,919	90,078	85,302	80,642	75,779	72,043
35.....	97,472	97,201	96,322	95,808	94,482	94,144	92,976	88,573	83,118	77,961	73,127	69,078
40.....	96,798	96,422	95,373	94,926	93,322	93,064	91,648	86,650	80,557	75,114	70,042	65,890
45.....	95,833	95,274	94,154	93,599	91,587	91,378	89,634	84,069	77,343	72,036	66,561	62,436
50.....	94,295	93,601	92,370	91,526	88,972	88,756	86,591	80,487	73,321	68,429	62,460	58,514
55.....	92,000	91,232	89,658	88,348	85,110	84,711	82,176	75,557	68,182	63,947	57,555	53,852
60.....	88,770	87,642	85,537	83,726	79,529	79,067	75,921	68,924	61,563	58,079	51,138	47,946
65.....	84,345	82,330	79,519	77,107	71,933	71,147	67,555	60,366	53,195	50,560	43,194	40,911
70.....	78,069	74,891	71,357	68,248	61,984	60,857	56,987	49,655	42,768	41,090	33,816	32,390
75.....	69,301	64,644	60,449	56,799	49,705	48,170	43,903	36,735	30,789	29,729	23,552	22,960
80.....	57,188	50,885	47,084	43,180	35,285	33,576	29,313	22,883	18,580	18,298	13,712	13,529
85.....	41,497	34,515	31,770	27,960	20,908	18,542	15,785	11,073	8,542	8,683	6,001	6,053
90.....	23,619	18,496	17,046	14,154	9,297	7,080	6,144	3,796	2,998	2,941	1,868	1,867
95.....	9,087	6,879	6,282	5,043	2,786	1,524	1,511	857	636	646	361	344
100.....	1,968	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.....	99,333	99,239	98,961	98,607	97,755	97,087	96,661	94,762	93,440	91,745	87,505	86,426
5.....	99,215	99,095	98,754	98,333	97,395	96,643	96,077	93,624	91,294	88,505	82,718	80,548
10.....	99,151	99,008	98,627	98,160	97,151	96,375	95,726	93,054	90,346	87,184	81,249	78,775
15.....	99,071	98,890	98,464	97,972	96,904	96,107	95,366	92,508	89,561	86,156	80,261	77,681
20.....	98,727	98,426	97,854	97,316	96,126	95,491	94,695	91,617	88,220	84,440	78,792	75,984
25.....	98,105	97,747	97,049	96,361	95,040	94,631	93,791	90,385	86,359	82,252	76,675	73,472
30.....	97,441	97,114	96,166	95,430	94,072	93,826	92,861	89,009	84,346	79,890	74,378	70,747
35.....	96,724	96,385	95,091	94,501	92,997	92,889	91,760	87,371	82,075	77,514	71,614	67,752
40.....	95,880	95,389	93,761	93,345	91,541	91,572	90,207	85,246	79,357	74,432	68,297	64,447
45.....	94,699	93,940	92,139	91,649	89,369	89,492	87,819	82,336	75,882	71,244	64,518	60,849
50.....	92,822	91,818	89,865	89,007	86,070	86,199	84,158	78,254	71,518	67,553	60,118	56,736
55.....	90,010	88,897	86,492	84,936	81,139	81,039	78,781	72,627	65,981	62,965	54,970	51,939
60.....	85,984	84,551	81,378	79,012	73,958	73,887	71,246	65,142	58,909	56,917	48,343	45,895
65.....	80,663	78,241	73,971	70,646	64,318	64,177	61,566	55,776	50,154	49,218	40,264	38,736
70.....	73,371	69,491	64,107	59,681	52,296	52,244	49,950	44,588	39,516	39,668	31,023	30,217
75.....	63,519	57,688	51,385	46,272	38,797	38,950	36,756	31,864	27,718	28,316	21,213	21,076
80.....	50,405	42,769	36,749	31,810	24,921	25,300	25,237	18,995	16,172	17,128	11,942	12,084
85.....	34,247	26,527	21,815	18,020	13,168	12,845	11,750	8,693	7,107	7,920	5,059	5,179
90.....	17,493	12,473	9,878	7,732	5,107	4,609	4,197	2,787	2,283	2,527	1,502	1,508
95.....	5,666	3,855	2,927	2,279	1,326	970	955	586	451	556	289	262
100.....	963	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.....	99,445	99,375	99,172	98,880	98,254	97,744	97,406	95,848	94,728	93,383	89,623	88,733
5.....	99,351	99,261	99,006	98,666	97,955	97,371	96,908	94,848	92,789	90,380	85,117	83,119
10.....	99,301	99,190	98,911	98,544	97,784	97,173	96,652	94,402	92,008	89,186	83,728	81,390
15.....	99,241	99,111	98,814	98,432	97,636	97,016	96,431	94,000	91,364	88,247	82,813	80,307
20.....	99,102	98,915	98,597	98,184	97,331	96,756	96,066	93,293	90,116	86,556	81,418	78,555
25.....	98,880	98,682	98,325	97,883	96,966	96,418	95,583	92,322	88,328	84,135	79,481	76,119
30.....	98,604	98,418	98,013	97,551	96,544	95,996	94,933	91,182	86,398	81,463	77,247	73,394
35.....	98,247	98,052	97,596	97,140	95,966	95,409	94,206	89,810	84,304	78,713	74,719	70,463
40.....	97,745	97,493	97,033	96,531	95,097	94,500	93,101	88,092	81,927	75,907	71,894	67,407
45.....	96,996	96,648	96,222	95,570	93,793	93,265	91,469	85,856	79,041	72,954	68,755	64,121

Table 20. Survivorship by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Number of survivors out of 100,000 born alive (lx)											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
FEMALE—Con.												
50.	95,798	95,425	94,932	94,060	91,852	91,327	89,075	82,828	75,456	69,452	65,001	60,415
55.	94,018	93,609	92,881	91,760	89,066	88,451	85,694	78,708	70,832	65,099	60,392	55,908
60.	91,575	90,767	89,742	88,414	85,139	84,430	80,890	73,093	64,795	59,438	54,226	50,155
65.	88,040	86,433	85,075	83,520	79,698	78,462	74,119	65,523	56,924	52,126	46,438	43,246
70.	82,760	80,219	78,522	76,720	71,955	70,100	64,873	55,449	46,774	42,741	36,916	34,721
75.	75,037	71,311	69,287	67,186	61,107	58,394	52,111	42,425	34,600	31,344	26,155	24,994
80.	63,820	58,455	56,986	54,372	46,445	43,063	36,486	27,524	21,578	19,613	15,682	15,129
85.	48,344	41,830	41,115	37,772	29,538	25,269	20,668	13,972	10,322	9,515	7,051	7,063
90.	29,178	23,936	23,666	20,578	14,160	10,056	8,548	5,044	3,656	3,314	2,269	2,306
95.	12,005	9,560	9,346	7,862	4,565	2,193	2,207	1,195	807	728	441	452
100.	2,758	2,183	2,251	1,927	954	264	298	179	82	72	49	43
See footnote at end of table												
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.	99,482	99,429	99,233	98,898	98,224	97,714	97,278	95,685	94,392	92,780	88,709	87,762
5.	99,384	99,313	99,068	98,675	97,930	97,353	96,790	94,713	92,466	89,771	84,147	82,071
10.	99,330	99,239	98,966	98,536	97,733	97,131	96,502	94,228	91,627	88,536	82,734	80,371
15.	99,262	99,146	98,843	98,391	97,546	96,928	96,228	93,792	90,982	87,633	81,816	79,344
20.	99,030	98,826	98,455	97,939	97,036	96,508	95,763	93,117	89,933	86,159	80,407	77,998
25.	98,621	98,406	97,972	97,340	96,406	95,965	95,169	92,213	88,454	84,106	78,392	75,202
30.	98,165	98,000	97,451	96,774	95,824	95,440	94,536	91,185	86,836	81,787	76,167	72,317
35.	97,646	97,506	96,810	96,192	95,152	94,798	93,750	89,941	85,004	79,277	73,568	69,522
40.	96,995	96,799	96,000	95,427	94,190	93,870	92,616	88,318	82,803	76,642	70,525	66,082
45.	96,059	95,759	94,932	94,257	92,681	92,374	90,847	86,069	79,989	73,705	67,090	62,920
50.	94,564	94,242	93,326	92,384	90,306	89,958	88,110	82,833	76,340	70,250	62,994	58,647
55.	92,354	92,050	90,833	89,427	86,688	86,173	84,027	78,218	71,551	65,875	58,163	54,450
60.	89,261	88,655	86,943	85,031	81,323	80,811	78,066	71,785	65,100	60,013	51,822	48,288
65.	84,955	83,518	81,123	78,585	73,889	73,102	69,850	63,201	56,655	52,411	43,904	41,505
70.	78,763	76,219	73,106	69,801	63,991	62,834	59,189	52,165	45,841	42,736	34,484	32,902
75.	70,024	66,022	62,175	58,299	51,586	49,895	45,688	38,610	33,406	31,086	24,151	23,356
80.	57,832	52,160	48,583	44,409	36,659	34,697	30,438	23,976	20,260	19,149	14,100	13,794
85.	41,941	35,461	32,850	28,768	21,578	19,017	16,239	11,483	9,325	9,078	6,178	6,192
90.	23,799	18,964	17,571	14,471	9,433	7,149	6,201	3,819	3,066	2,991	1,918	1,919
95.	9,022	6,971	6,416	5,067	2,743	1,521	1,500	801	636	643	364	355
100.	1,888	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.	99,438	99,373	99,138	98,769	97,994	97,408	96,931	95,188	93,768	91,975	87,674	86,655
5.	99,328	99,243	98,956	98,519	97,671	97,015	96,403	94,150	91,738	88,842	82,972	80,864
10.	99,268	99,163	98,839	98,357	97,441	96,758	96,069	93,601	90,810	87,530	81,519	79,109
15.	99,191	99,052	98,686	98,176	97,208	96,503	95,728	93,089	90,074	86,546	80,549	78,037
20.	98,872	98,616	98,134	97,525	96,480	95,908	95,104	92,293	88,904	84,997	79,116	76,376
25.	98,284	98,003	97,430	96,616	95,524	95,106	94,294	91,241	87,371	83,061	77,047	73,907
30.	97,647	97,436	96,662	95,783	94,716	94,401	93,489	90,092	85,707	80,888	74,810	71,219
35.	96,958	96,774	95,731	94,980	93,843	93,589	92,543	88,713	83,812	78,441	72,108	68,245
40.	96,140	95,859	94,588	93,984	92,631	92,427	91,173	86,880	81,457	75,733	68,848	64,954
45.	94,989	94,530	93,167	92,494	90,725	90,533	89,002	84,285	78,345	72,696	65,115	61,369
50.	93,146	92,588	91,124	90,105	87,690	87,424	85,601	80,521	74,288	69,107	60,741	57,274
55.	90,420	89,883	88,022	86,303	83,001	82,463	80,496	75,156	68,981	64,574	55,622	52,491
60.	86,559	85,773	83,182	80,625	75,969	75,485	73,172	67,787	61,933	58,498	48,987	46,452
65.	81,396	79,657	75,962	72,393	66,343	65,834	63,541	58,305	52,964	50,663	40,862	39,245
70.	74,213	71,039	66,181	61,384	54,138	53,825	51,735	46,739	41,880	40,873	31,527	30,640
75.	64,393	59,245	53,308	47,712	40,324	40,207	38,104	33,404	29,471	29,205	21,585	21,387
80.	51,197	44,121	38,245	32,788	25,885	25,993	24,005	19,860	17,221	17,655	12,160	12,266
85.	34,817	27,425	22,720	18,538	13,527	13,065	12,015	9,013	7,572	8,154	5,145	5,252
90.	17,721	12,840	10,214	7,891	5,125	4,600	4,209	2,812	2,356	2,568	1,523	1,523
95.	5,635	3,899	2,988	2,279	1,274	956	942	552	461	556	289	263
100.	918	625	523	404	189	115	118	65	40	61	31	22

Table 20. Survivorship by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Number of survivors out of 100,000 born alive (lx)											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	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.....	99,529	99,488	99,333	99,035	98,468	98,036	97,645	96,211	95,037	93,608	89,774	88,939
5.....	99,442	99,385	99,187	98,841	98,203	97,709	97,199	95,309	93,216	90,721	85,349	83,426
10.....	99,394	99,319	99,099	98,725	98,042	97,525	96,960	94,890	92,466	89,564	83,979	81,723
15.....	99,337	99,245	99,007	98,618	97,902	97,375	96,756	94,534	91,894	88,712	83,093	80,680
20.....	99,197	99,049	98,795	98,374	97,618	97,135	96,454	93,984	90,939	87,281	81,750	78,978
25.....	98,978	98,835	98,547	98,093	97,299	96,844	96,072	93,228	89,524	85,163	79,865	76,588
30.....	98,713	98,602	98,283	97,802	96,945	96,499	95,605	92,320	87,972	82,740	77,676	73,887
35.....	98,370	98,282	97,939	97,445	96,474	96,026	94,977	91,211	86,248	80,206	75,200	70,971
40.....	97,893	97,790	97,472	96,913	95,762	95,326	94,080	89,805	84,256	77,624	72,425	67,935
45.....	97,179	97,049	96,768	96,065	94,649	94,228	92,725	87,920	81,780	74,871	69,341	64,677
50.....	96,039	95,962	95,608	94,710	92,924	92,522	90,685	85,267	78,572	71,547	65,629	61,005
55.....	94,354	94,293	93,730	92,594	90,383	89,967	87,699	81,520	74,321	67,323	61,053	56,509
60.....	92,034	91,615	90,789	89,451	86,726	86,339	83,279	76,200	68,462	61,704	54,900	50,752
65.....	88,597	87,449	86,339	84,764	81,579	80,739	76,773	68,701	60,499	54,299	47,086	43,806
70.....	83,390	81,400	79,984	78,139	74,101	72,507	67,545	58,363	49,932	44,638	37,482	35,206
75.....	75,701	72,595	70,834	68,712	63,290	60,461	54,397	44,685	37,024	32,777	26,569	25,362
80.....	64,415	59,721	58,454	55,770	48,182	44,676	38,026	28,882	23,053	20,492	15,929	15,349
85.....	48,767	42,848	42,274	38,774	30,490	26,046	21,348	14,487	10,937	9,909	7,152	7,149
90.....	29,349	24,491	24,270	20,996	14,406	10,219	8,662	5,061	3,719	3,372	2,291	2,322
95.....	11,916	9,680	9,495	7,900	4,526	2,203	2,200	1,109	797	721	434	448
100.....	2,653	2,147	2,239	1,858	872	265	294	139	74	63	44	41
See footnote at end of table												
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.....	98,842	98,578	98,187	97,885	96,731	95,732	95,407	92,584	92,035	90,379	79,784	76,609
5.....	98,689	98,382	97,884	97,522	96,207	95,051	94,482	90,983	89,303	86,174	70,691	66,222
10.....	98,616	98,271	97,720	97,322	95,928	94,745	94,060	90,339	88,258	84,690	68,437	63,410
15.....	98,523	98,139	97,539	97,134	95,661	94,460	93,646	89,591	87,156	83,180	66,410	61,060
20.....	98,193	97,701	96,925	96,652	94,887	93,880	92,738	87,839	84,386	79,641	63,165	57,931
25.....	97,591	96,946	95,972	95,804	93,513	92,925	91,321	85,210	80,320	74,973	59,608	54,512
30.....	96,909	96,143	94,809	94,680	91,934	91,699	89,584	82,194	75,962	70,492	56,112	51,287
35.....	96,114	95,164	93,260	93,288	89,977	90,046	87,402	78,683	71,141	65,865	52,125	48,007
40.....	95,116	93,809	91,239	91,439	87,304	87,766	84,478	74,466	65,974	61,244	47,866	44,518
45.....	93,743	91,770	88,689	88,834	83,700	84,501	80,507	69,284	59,827	56,442	43,054	40,628
50.....	91,617	88,761	85,285	85,044	78,938	80,172	74,976	62,702	53,141	51,422	37,800	36,103
55.....	88,312	84,657	80,635	79,816	72,826	73,893	67,660	54,846	45,558	45,803	32,233	31,404
60.....	83,532	79,007	74,335	72,913	65,250	65,795	58,593	46,318	37,654	39,418	26,046	25,698
65.....	77,356	71,704	66,154	64,391	56,102	56,038	48,649	37,838	30,015	32,738	19,806	20,474
70.....	69,376	62,349	56,192	54,617	45,785	45,434	38,616	29,654	22,505	25,585	14,021	14,960
75.....	59,366	50,987	44,872	43,274	34,262	34,531	28,968	21,798	15,546	18,011	9,139	9,956
80.....	47,103	37,964	33,149	31,711	23,710	24,815	20,003	14,408	9,589	11,376	5,158	5,750
85.....	32,890	24,677	21,352	19,939	15,044	15,337	12,433	8,326	4,900	5,794	2,414	2,782
90.....	18,701	13,204	11,646	10,713	8,087	7,195	6,394	4,077	2,044	2,317	913	1,054
95.....	7,877	5,368	4,729	4,463	3,252	1,777	2,010	1,557	638	689	324	296
100.....	2,190	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.....	98,734	98,437	98,023	97,703	96,394	95,301	94,911	91,772	91,268	89,499	78,065	74,674
5.....	98,563	98,219	97,688	97,300	95,826	94,570	93,921	90,082	88,412	85,195	68,589	64,385
10.....	98,480	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.....	97,870	97,275	96,301	96,132	94,053	93,108	91,941	86,968	83,621	79,057	61,426	56,733
25.....	96,945	96,103	94,809	94,827	91,904	91,825	90,285	84,227	79,516	74,540	57,736	53,285
30.....	95,951	94,940	93,070	93,125	89,584	90,270	88,327	80,979	75,083	70,344	54,073	49,867
35.....	94,861	93,641	90,827	91,080	86,885	88,331	85,940	77,221	70,049	65,873	49,865	46,541
40.....	93,621	91,945	87,948	88,490	83,441	85,744	82,832	72,780	64,710	61,353	45,414	42,989
45.....	91,994	89,439	84,467	84,997	78,976	82,075	78,686	67,346	58,432	56,589	40,563	39,230

Table 20. Survivorship by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Number of survivors out of 100,000 born alive (lx)											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
BLACK MALE¹												
—Con.												
50.	89,500	85,653	79,984	80,065	73,282	77,239	72,891	60,495	51,748	51,880	35,427	34,766
55.	85,570	80,529	74,095	73,413	66,101	70,351	65,122	52,426	44,436	46,581	29,754	29,987
60.	79,633	73,588	66,334	64,980	57,457	61,669	55,535	43,833	36,790	40,506	23,750	24,194
65.	72,071	64,980	56,795	55,061	47,485	51,392	45,198	35,371	29,314	34,042	17,806	19,015
70.	62,706	54,253	45,690	44,213	36,925	39,914	35,018	27,236	21,741	26,923	12,295	13,829
75.	51,436	41,693	33,755	32,717	25,921	29,064	25,472	19,456	14,419	18,854	7,494	8,892
80.	38,267	28,497	22,549	22,017	16,560	19,994	16,904	12,186	8,239	11,615	3,894	4,831
85.	24,206	16,532	12,709	12,383	9,648	11,620	9,898	6,444	3,660	5,605	1,747	2,030
90.	12,064	7,625	5,972	5,708	4,696	5,174	4,642	2,836	1,246	2,040	595	634
95.	4,307	2,565	1,971	2,009	1,721	1,240	1,342	961	307	552	189	137
100.	988	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.	98,953	98,723	98,356	98,073	97,076	96,172	95,913	93,416	92,796	91,251	81,493	78,525
5.	98,820	98,550	98,087	97,751	96,598	95,543	95,055	91,906	90,185	87,149	72,768	68,056
10.	98,756	98,456	97,946	97,590	96,369	95,265	94,679	91,308	89,201	85,607	70,508	65,111
15.	98,677	98,354	97,818	97,450	96,172	95,057	94,343	90,594	88,088	83,954	68,218	62,384
20.	98,527	98,141	97,566	97,180	95,729	94,660	93,544	88,736	85,078	80,154	64,764	59,053
25.	98,244	97,785	97,140	96,754	95,035	94,005	92,336	86,198	81,067	75,359	61,430	55,795
30.	97,854	97,314	96,514	96,150	94,114	93,070	90,799	83,384	76,816	70,633	58,281	52,773
35.	97,331	96,632	95,599	95,338	92,807	91,670	88,805	80,092	72,192	65,857	54,595	49,567
40.	96,553	95,588	94,364	94,137	90,817	89,676	86,052	76,084	67,271	61,130	50,568	46,146
45.	95,414	93,979	92,676	92,322	88,001	86,793	82,257	71,157	61,365	56,230	45,947	42,279
50.	93,629	91,680	90,277	89,563	84,168	82,979	77,007	64,885	54,920	50,780	40,886	37,681
55.	90,901	88,517	86,793	85,653	79,177	77,362	70,196	57,314	47,074	44,742	35,415	33,124
60.	87,171	84,044	81,886	80,293	72,820	69,941	61,758	48,928	38,761	37,954	28,908	27,524
65.	82,252	77,941	75,031	73,266	64,716	60,825	52,358	40,504	30,852	31,044	22,302	21,995
70.	75,501	69,778	66,278	64,729	54,873	51,274	42,612	32,354	23,341	24,107	15,871	16,140
75.	66,595	59,361	55,684	53,831	43,193	40,540	32,981	24,502	16,576	17,216	10,657	11,066
80.	55,036	46,453	43,622	41,686	31,756	30,315	23,712	17,039	10,822	11,151	6,324	6,708
85.	40,402	32,053	30,089	28,004	21,358	19,744	15,550	10,622	6,033	5,972	3,029	3,567
90.	24,252	18,347	17,536	16,260	12,210	9,675	8,590	5,652	2,774	2,579	1,206	1,492
95.	10,814	7,989	7,687	7,312	5,217	2,438	2,875	2,345	941	818	448	462
100.	3,153	2,351	2,364	2,398	1,803	293	445	659	193	179	112	97

¹For 1939-41 and 1949-51, data shown are for the entire non-white population. During these periods, life tables were not constructed for the black population. See Technical notes.

Table 21. Life expectancy by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Average number of years of life remaining ex											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
ALL RACES												
0.....	78.66	76.86	75.37	73.88	70.75	69.89	68.07	63.62	59.20	56.40	51.49	49.24
1.....	78.14	76.40	75.08	73.82	71.19	70.75	69.16	65.76	61.94	59.94	57.11	55.20
5.....	74.23	72.49	71.22	70.00	67.43	67.04	65.54	62.49	59.29	57.99	56.21	54.98
10.....	69.27	67.55	66.29	65.10	62.57	62.19	60.74	57.82	54.84	53.79	52.15	51.14
15.....	64.31	62.61	61.38	60.19	57.69	57.33	55.91	53.10	50.25	49.37	47.73	46.81
20.....	59.47	57.82	56.63	55.46	53.00	52.58	51.20	48.54	45.94	45.30	43.53	42.79
25.....	54.71	53.08	51.93	50.81	48.37	47.89	46.56	44.09	41.85	41.47	39.60	39.12
30.....	49.96	48.31	47.23	46.12	43.71	43.18	41.91	39.67	37.75	37.68	35.70	35.51
35.....	45.23	43.57	42.58	41.43	39.07	38.51	37.31	35.30	33.68	33.89	31.90	31.92
40.....	40.52	38.90	37.98	36.79	34.52	33.92	32.81	31.03	29.67	30.08	28.20	28.34
45.....	35.90	34.34	33.44	32.27	30.12	29.50	28.49	26.90	25.79	26.25	24.54	24.77
50.....	31.45	29.90	29.03	27.94	25.93	25.29	24.40	22.98	22.06	22.50	20.98	21.26
55.....	27.16	25.61	24.83	23.85	21.99	21.37	20.57	19.31	18.53	18.90	17.55	17.88
60.....	23.06	21.55	20.90	20.02	18.34	17.71	17.04	15.91	15.24	15.54	14.42	14.76
65.....	19.13	17.77	17.28	16.51	15.00	14.39	13.83	12.80	12.23	12.47	11.60	11.86
70.....	15.45	14.27	13.96	13.32	12.00	11.38	10.92	10.00	9.58	9.74	9.11	9.30
75.....	12.08	11.12	11.00	10.48	9.32	8.71	8.40	7.62	7.32	7.49	6.99	7.08
80.....	9.08	8.42	8.40	7.98	7.10	6.39	6.34	5.73	5.50	5.63	5.25	5.30
85.....	6.53	6.22	6.23	5.96	5.28	4.58	4.69	4.31	4.19	4.21	4.00	3.96
90.....	4.59	4.49	4.50	4.43	3.94	3.22	3.44	3.30	3.15	3.22	3.03	2.95
95.....	3.21	3.19	3.29	3.34	3.06	2.43	2.54	2.61	2.26	2.32	2.35	2.18
100.....	2.31	2.27	2.46	2.73	2.62	1.91	1.92	2.13	1.51	1.53	1.85	1.58
MALE												
0.....	76.20	74.13	71.83	70.11	67.04	66.80	65.47	61.60	57.71	55.50	49.86	47.88
1.....	75.71	73.70	71.58	70.10	67.58	67.80	66.73	64.00	60.75	59.47	55.95	54.35
5.....	71.79	69.80	67.73	66.29	63.82	64.10	63.12	60.76	58.14	57.60	55.11	54.22
10.....	66.84	64.86	62.81	61.41	58.98	59.27	58.35	56.12	53.75	53.44	51.07	50.39
15.....	61.89	59.94	57.91	56.52	54.12	54.43	53.56	51.43	49.18	49.05	46.66	46.06
20.....	57.10	55.21	53.25	51.88	49.54	49.77	48.92	46.91	44.88	44.99	42.48	42.03
25.....	52.44	50.57	48.67	47.37	45.07	45.19	44.36	42.51	40.79	41.11	38.59	38.38
30.....	47.78	45.89	44.10	42.81	40.51	40.56	39.78	38.13	36.71	37.26	34.70	34.76
35.....	43.12	41.21	39.57	38.20	35.95	35.94	35.23	33.79	32.65	33.43	30.94	31.19
40.....	38.47	36.62	35.09	33.64	31.48	31.42	30.79	29.57	28.68	29.63	27.32	27.65
45.....	33.92	32.14	30.66	29.22	27.18	27.09	26.55	25.52	24.87	25.84	23.77	24.14
50.....	29.55	27.82	26.37	25.00	23.12	23.02	22.59	21.72	21.25	22.11	20.32	20.70
55.....	25.39	23.65	22.30	21.08	19.36	19.32	18.96	18.20	17.79	18.53	16.98	17.38
60.....	21.46	19.73	18.53	17.46	15.99	15.94	15.68	14.99	14.62	15.22	13.95	14.33
65.....	17.70	16.11	15.12	14.21	12.99	12.95	12.74	12.07	11.72	12.20	11.24	11.50
70.....	14.20	12.80	12.05	11.35	10.39	10.33	10.11	9.46	9.18	9.52	8.83	9.02
75.....	11.00	9.89	9.39	8.90	8.13	7.99	7.83	7.22	7.02	7.31	6.75	6.84
80.....	8.18	7.44	7.12	6.80	6.27	5.95	5.94	5.44	5.27	5.49	5.10	5.11
85.....	5.83	5.47	5.31	5.13	4.73	4.39	4.41	4.11	4.02	4.10	3.90	3.82
90.....	4.07	3.95	3.89	3.89	3.60	3.18	3.30	3.17	3.06	3.21	3.01	2.86
95.....	2.85	2.82	2.92	2.98	2.82	2.43	2.49	2.52	2.21	2.38	2.36	2.13
100.....	2.07	2.03	2.25	2.49	2.43	1.91	1.92	2.05	1.50	1.58	1.81	1.55
FEMALE												
0.....	81.04	79.47	78.81	77.62	74.64	73.24	70.96	65.89	60.90	57.40	53.24	50.70
1.....	80.49	78.97	78.47	77.50	74.97	73.93	71.84	67.73	65.37	60.45	58.37	56.10
5.....	76.57	75.06	74.60	73.67	71.19	70.21	68.21	64.43	60.66	58.41	57.39	55.80
10.....	71.61	70.11	69.67	68.75	66.31	65.35	63.38	59.73	56.16	54.16	53.31	51.94
15.....	66.65	65.16	64.73	63.83	61.41	60.45	58.52	54.97	51.54	49.71	48.87	47.60
20.....	61.74	60.29	59.87	58.98	56.59	55.60	53.73	50.37	47.21	45.63	44.66	43.60
25.....	56.87	55.42	55.03	54.16	51.80	50.79	48.99	45.87	43.11	41.86	40.69	39.92
30.....	52.02	50.57	50.19	49.33	47.01	46.00	44.28	41.41	39.02	38.15	36.79	36.30
35.....	47.20	45.75	45.40	44.53	42.28	41.27	39.63	37.01	34.92	34.40	32.95	32.71
40.....	42.43	40.99	40.65	39.80	37.64	36.61	35.06	32.68	30.86	30.58	29.15	29.08
45.....	37.74	36.33	35.97	35.17	33.13	32.09	30.64	28.46	26.89	26.71	25.36	25.44

Table 21. Life expectancy by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Average number of years of life remaining ex											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
FEMALE—Con.												
50.	33.17	31.76	31.42	30.69	28.77	27.71	26.40	24.40	23.05	22.92	21.67	21.84
55.	28.75	27.32	27.05	26.39	24.59	23.53	22.33	20.54	19.38	19.28	18.13	18.39
60.	24.45	23.10	22.90	22.29	20.60	19.52	18.50	16.92	15.94	15.87	14.90	15.21
65.	20.33	19.12	19.02	18.44	16.83	15.80	14.95	13.57	12.78	12.73	11.96	12.22
70.	16.45	15.40	15.38	14.84	13.35	12.37	11.71	10.56	9.99	9.96	9.38	9.59
75.	12.87	11.99	12.08	11.58	10.26	9.33	8.94	8.01	7.61	7.65	7.20	7.34
80.	9.67	9.05	9.13	8.69	7.68	6.72	6.67	5.99	5.70	5.75	5.37	5.51
85.	6.93	6.62	6.66	6.38	5.63	4.71	4.90	4.47	4.32	4.30	4.08	4.12
90.	4.81	4.71	4.73	4.66	4.14	3.25	3.54	3.39	3.24	3.23	3.05	3.04
95.	3.32	3.29	3.40	3.48	3.18	2.43	2.57	2.67	2.30	2.27	2.34	2.24
100.	2.34	2.29	2.52	2.81	2.69	1.91	1.93	2.17	1.52	1.48	1.91	1.61
See footnote at end of table												
WHITE												
0.	78.94	77.43	76.13	74.53	71.62	70.73	69.02	64.92	60.86	57.42	51.90	49.64
1.	78.35	76.87	75.72	74.35	71.91	71.38	69.95	66.84	63.46	60.87	57.46	55.47
5.	74.43	72.96	71.84	70.52	68.12	67.64	66.29	63.52	60.75	58.86	56.51	55.18
10.	69.47	68.01	66.92	65.62	63.26	62.79	61.48	58.83	56.29	54.65	52.43	51.34
15.	64.51	63.07	61.99	60.71	58.37	57.92	56.65	54.09	51.69	50.21	48.01	47.01
20.	59.66	58.27	57.23	55.98	53.66	53.16	51.91	49.47	47.28	46.04	43.77	43.17
25.	54.89	53.51	52.50	51.30	49.00	48.44	47.22	44.92	43.02	42.07	39.79	39.26
30.	50.14	48.72	47.76	46.59	44.28	43.69	42.52	40.40	38.76	38.17	35.86	35.51
35.	45.39	43.95	43.06	41.86	39.58	38.97	37.86	35.93	34.50	34.27	32.03	32.01
40.	40.68	39.25	38.41	37.17	34.95	34.33	33.29	31.54	30.33	30.38	28.29	28.28
45.	36.05	34.65	33.81	32.60	30.48	29.84	28.88	27.29	26.29	26.45	24.60	24.82
50.	31.57	30.17	29.34	28.21	26.21	25.57	24.70	23.26	22.42	22.64	21.01	21.18
55.	27.27	25.82	25.08	24.05	22.19	21.58	20.77	19.47	18.75	18.97	17.57	17.91
60.	23.12	21.71	21.08	20.16	18.48	17.84	17.15	15.98	15.37	15.57	14.43	14.73
65.	19.16	17.88	17.40	16.59	15.08	14.44	13.86	12.80	12.28	12.47	11.60	11.87
70.	15.46	14.34	14.02	13.35	12.01	11.37	10.89	9.96	9.58	9.72	9.10	9.31
75.	12.06	11.15	11.03	10.47	9.27	8.65	8.34	7.55	7.30	7.47	6.98	7.08
80.	9.04	8.42	8.39	7.95	7.01	6.33	6.27	5.64	5.45	5.59	5.22	5.30
85.	6.49	6.19	6.20	5.90	5.19	4.53	4.62	4.20	4.12	4.15	3.97	3.95
90.	4.53	4.44	4.46	4.36	3.84	3.20	3.41	3.16	3.10	3.17	3.00	2.93
95.	3.16	3.14	3.25	3.25	2.92	2.43	2.53	2.45	2.22	2.28	2.29	2.16
100.	2.26	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.	76.54	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.	57.34	55.72	53.96	52.45	50.22	50.25	49.52	47.76	46.02	45.60	42.71	42.19
25.	52.67	51.05	49.33	47.92	45.70	45.65	44.93	43.28	41.78	41.60	38.79	38.52
30.	48.00	46.34	44.71	43.31	41.07	40.97	40.29	38.80	37.54	37.65	34.87	34.88
35.	43.32	41.64	40.12	38.66	36.43	36.31	35.68	34.36	33.33	33.74	31.08	31.29
40.	38.67	37.01	35.57	34.04	31.87	31.73	31.17	30.03	29.22	29.86	27.43	27.74
45.	34.10	32.49	31.07	29.55	27.48	27.34	26.87	25.87	25.28	26.00	23.86	24.21
50.	29.72	28.12	26.71	25.26	23.34	23.22	22.83	21.96	21.51	22.22	20.39	20.76
55.	25.54	23.88	22.56	21.25	19.51	19.45	19.11	18.34	17.97	18.59	17.03	17.42
60.	21.56	19.90	18.71	17.56	16.07	16.01	15.76	15.05	14.72	15.25	13.98	14.35
65.	17.76	16.22	15.24	14.26	13.02	12.97	12.75	12.07	11.77	12.21	11.25	11.51
70.	14.23	12.87	12.11	11.35	10.38	10.29	10.07	9.42	9.20	9.51	8.83	9.03
75.	11.00	9.92	9.40	8.87	8.06	7.92	7.77	7.17	7.02	7.30	6.75	6.84
80.	8.16	7.43	7.11	6.76	6.18	5.89	5.88	5.38	5.26	5.47	5.09	5.10
85.	5.79	5.43	5.28	5.09	4.63	4.34	4.35	4.02	3.99	4.06	3.88	3.81
90.	4.01	3.90	3.85	3.83	3.49	3.16	3.27	3.06	3.03	3.18	2.99	2.85
95.	2.80	2.77	2.88	2.91	2.67	2.43	2.48	2.40	2.19	2.36	2.31	2.12
100.	2.03	1.98	2.21	2.41	2.20	1.91	1.92	1.96	1.49	1.58	1.68	1.55

Table 21. Life expectancy by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Average number of years of life remaining ex											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
WHITE FEMALE												
0.....	81.29	79.99	79.45	78.22	75.49	74.19	72.03	67.29	62.67	58.53	53.62	51.08
1.....	80.67	79.40	78.99	77.98	75.66	74.68	72.77	68.93	64.93	61.51	58.69	56.39
5.....	76.74	75.48	75.10	74.13	71.86	70.92	69.09	65.57	62.17	59.43	57.67	56.03
10.....	71.78	70.53	70.16	69.21	66.97	66.05	64.26	60.85	57.65	55.17	53.57	52.15
15.....	66.82	65.58	65.23	64.29	62.07	61.15	59.39	56.07	53.00	50.67	49.12	47.79
20.....	61.91	60.70	60.36	59.44	57.24	56.29	54.56	51.38	48.52	46.46	44.88	43.77
25.....	57.04	55.83	55.51	54.60	52.42	51.45	49.77	46.78	44.25	42.55	40.88	40.05
30.....	52.19	50.95	50.65	49.76	47.60	46.63	45.00	42.21	39.99	38.72	36.96	36.42
35.....	47.36	46.11	45.82	44.93	42.82	41.84	40.28	37.70	35.73	34.86	33.09	32.82
40.....	42.58	41.33	41.03	40.16	38.12	37.13	35.64	33.25	31.52	30.94	29.26	29.17
45.....	37.87	36.62	36.30	35.49	33.54	32.53	31.12	28.90	27.39	26.98	25.45	25.51
50.....	33.29	32.01	31.71	30.96	29.11	28.08	26.76	24.72	23.41	23.12	21.74	21.89
55.....	28.83	27.53	27.29	26.61	24.85	23.81	22.58	20.73	19.60	19.40	18.18	18.43
60.....	24.49	23.25	23.09	22.45	20.79	19.69	18.64	17.00	16.05	15.93	14.92	15.23
65.....	20.34	19.23	19.14	18.55	16.93	15.88	15.00	13.56	12.81	12.75	11.97	12.23
70.....	16.45	15.47	15.46	14.89	13.37	12.38	11.68	10.50	9.98	9.94	9.38	9.59
75.....	12.85	12.02	12.11	11.58	10.21	9.28	8.87	7.92	7.56	7.62	7.20	7.33
80.....	9.63	9.04	9.12	8.65	7.59	6.67	6.59	5.88	5.63	5.70	5.35	5.50
85.....	6.88	6.59	6.62	6.32	5.54	4.66	4.83	4.34	4.24	4.24	4.06	4.10
90.....	4.76	4.67	4.69	4.59	4.05	3.23	3.51	3.24	3.17	3.16	3.00	3.02
95.....	3.26	3.24	3.36	3.39	3.04	2.43	2.56	2.47	2.24	2.20	2.27	2.21
100.....	2.29	2.24	2.49	2.70	2.49	1.91	1.92	1.95	1.48	1.42	1.74	1.58
See footnote at end of table												
BLACK¹												
0.....	75.08	71.81	69.16	68.52	64.11	63.91	60.73	53.85	48.53	47.03	35.87	33.80
1.....	74.96	71.84	69.43	68.99	65.27	65.75	62.65	57.15	51.71	51.01	43.84	43.00
5.....	71.07	67.98	65.64	65.25	61.62	62.21	59.25	54.13	49.25	49.44	45.34	45.55
10.....	66.12	63.05	60.75	60.38	56.79	57.41	54.50	49.50	44.80	45.26	41.74	42.46
15.....	61.18	58.13	55.86	55.49	51.94	52.57	49.73	44.89	40.37	41.02	38.02	39.04
20.....	56.38	53.38	51.19	50.75	47.34	47.88	45.19	40.73	36.62	37.72	34.86	36.03
25.....	51.71	48.78	46.67	46.18	43.00	43.35	40.85	36.91	33.32	34.91	31.72	33.04
30.....	47.06	44.16	42.22	41.69	38.70	38.89	36.59	33.17	30.07	31.98	28.43	29.96
35.....	42.43	39.59	37.87	37.28	34.48	34.56	32.44	29.53	26.94	29.07	25.39	26.82
40.....	37.84	35.12	33.65	32.98	30.46	30.39	28.48	26.06	23.82	26.07	22.41	23.73
45.....	33.36	30.84	29.55	28.87	26.65	26.46	24.75	22.82	20.97	23.17	19.58	20.67
50.....	29.07	26.80	25.62	25.03	23.11	22.74	21.38	19.94	18.22	20.17	16.84	17.95
55.....	25.06	22.97	21.95	21.50	19.83	19.45	18.41	17.43	15.80	17.33	14.33	15.23
60.....	21.34	19.43	18.59	18.29	16.83	16.53	15.87	15.18	13.62	14.72	12.16	13.06
65.....	17.84	16.14	15.56	15.37	14.16	13.96	13.59	13.02	11.49	12.22	10.22	10.87
70.....	14.59	13.18	12.87	12.67	11.77	11.63	11.48	10.93	9.54	9.90	8.59	8.96
75.....	11.62	10.54	10.48	10.32	9.89	9.52	9.48	8.97	7.84	8.00	7.08	7.24
80.....	8.97	8.29	8.30	8.17	8.20	7.28	7.62	7.31	6.19	6.22	5.80	5.79
85.....	6.75	6.41	6.51	6.54	6.54	5.27	5.79	5.91	4.92	4.88	4.80	4.56
90.....	5.02	4.90	4.94	5.13	5.09	3.48	3.97	4.64	3.83	3.84	4.26	3.60
95.....	3.72	3.71	3.82	4.08	4.28	2.43	2.70	3.51	2.83	2.90	3.31	2.82
100.....	2.79	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.....	71.85	68.17	64.47	64.10	60.00	61.48	58.91	52.26	47.55	47.14	34.05	32.54
1.....	71.77	68.25	64.76	64.60	61.24	63.50	61.06	55.93	51.08	51.63	42.53	42.46
5.....	67.89	64.40	60.98	60.86	57.60	59.98	57.69	52.95	48.69	50.18	44.25	45.06
10.....	62.94	59.48	56.09	56.01	52.79	55.19	52.96	48.34	44.27	45.99	40.65	41.90
15.....	58.01	54.57	51.22	51.14	47.96	50.39	48.23	43.74	39.83	41.75	36.77	38.26
20.....	53.29	49.92	46.71	46.48	43.49	45.78	43.73	39.52	35.95	38.36	33.46	35.11
25.....	48.77	45.50	42.40	42.09	39.45	41.38	39.49	35.72	32.67	35.54	30.44	32.21
30.....	44.25	41.02	38.14	37.81	35.40	37.05	35.31	32.05	29.45	32.51	27.33	29.25
35.....	39.73	36.56	34.02	33.60	31.42	32.81	31.21	28.48	26.39	29.54	24.42	26.16
40.....	35.23	32.18	30.05	29.51	27.61	28.72	27.29	25.06	23.36	26.53	21.57	23.12
45.....	30.80	28.01	26.18	25.61	24.03	24.89	23.59	21.88	20.59	23.55	18.85	20.09

Table 21. Life expectancy by age, race, and sex: Death registration States, 1900-1902 to 1919-21, and United States, 1929-31 to 2010—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929-31, data are for groups of registration States as follows: 1900-1902 and 1909-11, 10 States and the District of Columbia; 1919-21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

Age, race, and sex	Average number of years of life remaining ex											
	2010	1999-2001	1989-91	1979-81	1969-71	1959-61	1949-51	1939-41	1929-31	1919-21	1909-11	1900-1902
BLACK MALE¹												
—Con.												
50.	26.59	24.13	22.50	22.03	20.69	21.28	20.25	19.06	17.92	20.47	16.21	17.34
55.	22.68	20.50	19.08	18.79	17.66	18.11	17.36	16.60	15.46	17.50	13.82	14.69
60.	19.18	17.19	16.01	15.89	14.93	15.29	14.91	14.37	13.15	14.74	11.67	12.62
65.	15.92	14.12	13.27	13.29	12.53	12.84	12.75	12.21	10.87	12.07	9.74	10.38
70.	12.91	11.40	10.88	10.94	10.40	10.81	10.74	10.11	8.78	9.58	8.00	8.33
75.	10.18	9.07	8.84	8.90	8.76	8.93	8.83	8.17	6.99	7.61	6.58	6.60
80.	7.80	7.12	7.01	7.03	7.35	6.87	7.07	6.58	5.42	5.83	5.53	5.12
85.	5.89	5.52	5.58	5.61	5.92	5.08	5.38	5.34	4.30	4.53	4.48	4.04
90.	4.41	4.23	4.24	4.47	4.68	3.42	3.78	4.23	3.42	3.60	4.01	3.21
95.	3.32	3.24	3.37	3.62	3.92	2.43	2.64	3.20	2.54	2.61	3.15	2.50
100.	2.54	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.	78.00	75.16	73.73	72.88	68.32	66.47	62.70	55.56	49.51	46.92	37.67	35.04
1.	77.82	75.13	73.96	73.31	69.37	68.10	64.37	58.46	52.33	50.39	45.15	43.54
5.	73.92	71.26	70.16	69.54	65.70	64.54	60.93	55.40	49.81	48.70	46.42	46.04
10.	68.97	66.32	65.26	64.65	60.85	59.72	56.17	50.75	45.33	44.54	42.84	43.02
15.	64.02	61.39	60.34	59.74	55.97	54.85	51.36	46.13	40.87	40.36	39.18	39.79
20.	59.12	56.52	55.49	54.90	51.22	50.07	46.77	42.04	37.22	37.15	36.14	36.89
25.	54.28	51.71	50.72	50.13	46.57	45.40	42.35	38.20	33.93	34.35	32.97	33.90
30.	49.48	46.95	46.03	45.43	42.00	40.83	38.02	34.40	30.67	31.48	29.61	30.70
35.	44.74	42.26	41.45	40.79	37.56	36.41	33.82	30.83	27.47	28.58	26.44	27.52
40.	40.07	37.69	36.96	36.28	33.32	32.16	29.82	27.19	24.30	25.60	23.34	24.37
45.	35.52	33.29	32.58	31.94	29.31	28.14	26.07	23.89	21.39	22.61	20.43	21.36
50.	31.15	29.06	28.38	27.84	25.52	24.31	22.67	20.95	18.60	19.76	17.65	18.67
55.	27.00	25.01	24.41	24.00	21.97	20.89	19.62	18.38	16.27	17.09	14.98	15.88
60.	23.05	21.20	20.71	20.42	18.66	17.83	16.95	16.10	14.22	14.69	12.78	13.60
65.	19.27	17.65	17.37	17.13	15.67	15.12	14.54	13.95	12.24	12.41	10.82	11.38
70.	15.76	14.41	14.32	14.05	13.02	12.46	12.29	11.82	10.38	10.25	9.22	9.62
75.	12.52	11.49	11.56	11.37	10.85	10.10	10.15	9.81	8.62	8.37	7.55	7.90
80.	9.60	8.96	9.05	8.95	8.87	7.66	8.15	8.02	6.90	6.58	6.05	6.48
85.	7.14	6.86	6.99	7.09	7.00	5.44	6.15	6.41	5.48	5.22	5.09	5.10
90.	5.24	5.16	5.24	5.47	5.41	3.52	4.13	4.96	4.20	4.07	4.50	4.01
95.	3.82	3.84	3.97	4.30	4.58	2.43	2.74	3.71	3.09	3.18	3.45	3.15
100.	2.82	2.84	2.97	3.69	4.20	1.91	1.94	2.70	2.04	2.23	2.39	2.49

¹For 1939-41 and 1949-51, data shown are for the entire non-white population. During these periods, life tables were not constructed for the black population. See Technical notes.

Technical Notes

The life table program

Three series of complete life tables for the U.S. population are prepared by the Centers for Disease Control and Prevention (CDC) 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 (8). The methodology was again revised for data years 2000–2007 using a methodology similar to that of the 1999–2001 decennial life tables (9). 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 (10).

The methodology used to estimate the 2008–2010 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 2008–2010 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 (10). A full description of the methodology used to estimate the 2010 life tables is provided below. See “United States Life Tables, 2005” (9) 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 (11–13). 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” (11).

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.

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 (<http://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 2008–2010 life tables. As a result, the values may differ from those previously published in annual final mortality and life table reports (14).

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 being 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, figures for the black

population during the periods 1939–1941 and 1949–1951 were estimated using figures 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. Figures 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 figures were estimated by weighted averages using population distributions as the weights. For example, life expectancy at age 20 for the total black population was estimated by a weighted average of black male and black female life expectancies at age 20, using as weights the population distribution by sex of the black population aged 20.

Annual life tables were initiated in 1945 for white males, white females, all other males, and all other females. The figures in [Table 19](#) by race and sex for the following years were estimated using a procedure other than the abridged life table methodology (15):

<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 figures 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 2010 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 (16). This revision allowed individuals to report more than one race and increased the race choices from four to five by separating the Asian and Pacific Islander groups. In 2010, 37 states and the District of Columbia had adopted the 1997 OMB standards, while 13 others continued to collect race and ethnicity data according to the 1977 OMB standards

(17). 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 (18).

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 based on an estimation procedure applied to the April 1, 2010 count of the population. Reflecting the 1997 OMB guidelines on race and ethnicity reporting (16), 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 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 2010, 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 Native Hawaiian or other Pacific Islander persons as a combined category (Asian or Pacific Islander) and to reflect age as of the census reference date (19). The procedures used to produce the bridged populations are described elsewhere (18).

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 (8). Medicare data are considered to be more accurate than vital statistics and census data at the oldest ages because Medicare enrollees must have proof of age in order to enroll (20). However, the reliability of Medicare data beyond age 100 declines because of the small percentage of persons who enrolled at the start of the Medicare program in 1965 and for whom it was not possible to verify exact age (20). Further, the Medicare race and ethnicity classification system makes it impossible to correctly identify the Hispanic, American Indian or Alaska Native, or Asian or Pacific Islander populations (11,21). It is, however, possible to use Medicare data to estimate old-age mortality for both the white and black race groups, irrespective of Hispanic origin, as has been done traditionally, and to estimate old-age mortality for the non-Hispanic segments of these populations (11). 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 (11).

To estimate death rates for the Medicare white, black, non-Hispanic white, and non-Hispanic black populations in 2010, age-specific numbers of deaths and population counts by sex and race for the population aged 66–99 from the 2012 and 2013 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 2012 file contains final Medicare population counts as of January 1, 2010 and the 2013 file contains final Medicare

population counts as of January 1, 2011 and final Medicare death counts as of January 1st, 2010. 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 1st 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 1st of the reporting year are on average exact age $x+1/2$.

Preliminary adjustment of the data

Adjustments for unknown age

An adjustment is made to account for the small proportion of deaths each year for which age is not reported on the death certificate. The number of deaths in each age category is adjusted proportionally to account for those with not-stated ages. The 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:

$$F = \frac{D}{D^a} \tag{1}$$

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 2010.

Adjustment for misclassification of race and Hispanic origin on death certificates

The latest research to evaluate race and Hispanic origin reporting on U.S. death certificates found that the misclassification of race and Hispanic origin on death certificates in the United States accounts for a net underestimate of 5% for total Hispanic deaths, a net underestimate of 1% for total non-Hispanic black deaths, and a net overestimate of less than one-half percent for non-Hispanic white deaths, but no underestimate for the population racially classified as white or black, irrespective of Hispanic origin (12,13). 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 during the period 1990-1998 (12,13).

NLMS linked records are used to estimate sex-age-specific ratios of CPS race and Hispanic origin counts to death certificate counts (12,13). The CPS/death certificate ratio, or “classification ratio,” is specifically the ratio of the weighted count of self-reported race and ethnicity on the CPS to the weighted count of the same racial 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 (12,13). The assumption is made that the race and ethnicity reported

Table I. Values for F used to adjust for not-stated age based on 2010 mortality data.

Race, Hispanic origin and sex	Total deaths	Total deaths for which age was not stated	F
Total	2,468,435	126	1.00005105
Male	1,232,432	87	1.00007060
Female	1,236,003	39	1.00003155
White	2,114,749	95	1.00004492
Male	1,051,514	66	1.00006277
Female	1,063,235	29	1.00002728
Black	286,959	23	1.00008016
Male	145,802	18	1.00012347
Female	141,157	5	1.00003542
Hispanic	144,490	7	1.00004845
Male	79,622	5	1.00006280
Female	64,868	2	1.00003083
Non-Hispanic white	1,969,916	62	1.00003147
Male	971,604	40	1.00004117
Female	998,312	22	1.00002204
Non-Hispanic black	283,438	17	1.00005998
Male	143,824	15	1.00010431
Female	139,614	2	1.00001433

SOURCE: CDC/NCHS, National Vital Statistics System.

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 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 (16).

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:

$${}_nD_x = {}_nD_x^F * {}_nCR_x \tag{2}$$

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 2009 and 2010 linked birth/infant death data files rather than the traditional birth and death data files (22,23). 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

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

Ages	Hispanic			non-Hispanic white			non-Hispanic Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Ages	1.0501	1.0415	1.0614	0.9960	0.9954	0.9966	1.0055	1.0066	1.0043
0 ¹	1.0419	1.0406	1.0417	0.9843	0.9854	0.9841	1.0461	1.0424	1.0506
1-14	0.9198*	1.0000*	0.7994*	0.9930	0.9869	1.0011	1.0200	1.0000	1.0689*
15-24	0.9650	0.9770	0.9290	1.0032	1.0040	1.0010	0.9997	0.9996	1.0000
25-34	1.0189	1.0542	0.9288	0.9975	0.9872	1.0212	1.0043	1.0034	1.0060
35-44	1.0803	1.0863	1.0657	0.9902	0.9864	0.9971	1.0066	1.0081	1.0045
45-54	1.0501	1.0152	1.1208	0.9938	0.9943	0.9930	1.0023	1.0144	0.9880
55-64	1.0260	1.0291	1.0216	0.9932	0.9915	0.9958	1.0135	1.0174	1.0087
65-74	1.0700	1.0640	1.0779	0.9950	0.9961	0.9935	1.0036	0.9979	1.0095
75-84	1.0473	1.0316	1.0651	0.9967	0.9964	0.9971	1.0040	1.0058	1.0023
85-94	1.0468	1.0261	1.0614	0.9978	0.9975	0.9979	1.0083	1.0101	1.0072
95 +	1.1277	1.1700	1.1000	0.9981	0.9927	0.9998	0.9979	1.0300	0.9881

¹ Ratios for age 0 are estimated as the ratio of infant mortality rates based on the traditional death and birth files to the infant mortality rates based on the 2009 linked birth/infant death data file and only shown for illustration purposes; see text for details.

* 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. SOURCE: CDC/NCHS, National Vital Statistics System.

data files to infant mortality rates based on the linked birth/infant death data file shows that using the traditional files overestimates the infant mortality rate by 4% for Hispanic infants and by 5% for non-Hispanic black infants. It underestimates the infant mortality 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 irrespective of correction for ethnic misclassification (11,24).

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 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 and non-Hispanic white and 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 2010, B^t is the number of live births in 2010, and B^{t-1} is the number of live births in 2009. Table III shows separation factors and numbers of births for 2009-2010.

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 for 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 1st of the reporting year, Medicare death rates are in one-half years of age. As a result, M_x^M is estimated as follows:

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

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

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

and $D_{y,x}$ is reported age x at death in the Medicare data as of January 1, year y , $P_{y,x-1}$ 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 (26). 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 peaks. 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 (27). 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 (26). 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 2010 are presented in Table IV.

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

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

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).

Table III. Births in 2009 and 2010, deaths in 2010 of infants born in 2009 and 2010, and separation factors by race, Hispanic origin, and sex: United States.

	Total			White			Black			Hispanic			non-Hispanic white			non-Hispanic black		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Births																		
2009.....	4,130,665	2,113,856	2,016,809	3,173,293	1,625,436	1,547,857	657,618	334,142	323,476	999,548	510,477	489,071	2,212,552	1,134,654	1,077,898	609,584	309,751	299,833
2010.....	3,999,386	2,046,935	1,952,451	3,069,315	1,571,470	1,497,845	636,425	323,956	312,469	945,180	481,328	463,852	2,162,406	1,109,384	1,053,022	589,808	300,487	289,321
Deaths in 2010 of infants born in																		
2009.....	3,123	1,772	1,351	2,016	1,124	892	937	553	384	630	350	283	1,444	829	615	852	464	388
2010.....	21,463	11,930	9,533	13,938	7,747	6,191	6,464	3,563	2,901	4,334	2,406	1,925	9,748	5,402	4,346	5,906	3,306	2,600
Separation factor (f) . . .	0.127	0.129	0.124	0.126	0.127	0.126	0.127	0.134	0.117	0.127	0.126	0.128	0.127	0.128	0.127	0.127	0.135	0.117

SOURCE: CDC/NCHS, National Vital Statistics System.

Table IV. Estimated parameters α and β used for predicting m_x and starting age of modeled age span: U.S. Life Tables, 2010

	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	84	85	85	84	85	84	82	85	85	84	85	85	82	85
$\ln(\alpha)$	-12.86121 (.099)	-12.79993 (.185)	-13.57936 (.077)	-13.08062 (.074)	-13.05225 (.184)	-13.77990 (.054)	-10.69250 (.159)	-10.01924 (.280)	-11.35487 (.212)	-13.06553 (.074)	-12.85709 (.176)	-13.76613 (.054)	-10.35808 (.225)	-9.942212 (.277)	-11.29978 (.208)
β1239622 (.001)	.1255589 (.002)	.1307863 (.001)	.1265489 (.001)	.1285229 (.002)	.1331578 (.001)	.0991071 (.002)	.0941331 (.003)	.1054099 (.002)	.1263934 (.001)	.1263651 (.002)	.1330158 (.001)	.0954463 (.002)	.0933314 (.003)	.1048412 (.002)

SOURCE: CDC/NCHS, National Vital Statistics System.

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% of that of the non-Hispanic white population (12,13,24,28). 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 (3,29-31).

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:

$$\bar{Y}_x = \alpha + \beta Y_x^S \quad [12]$$

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

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

Y_x^S is the logit of the probability of death in the standard population, q_x^S , i.e.,

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

α is the predicted parameter that measures the level of mortality of the population of interest relative to the standard population, and β is the predicted parameter that measures the slope of the mortality function of the population of interest relative to the standard population (3,29-31). Table V shows values of predicted α and β and their standard errors.

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).

Table V. Estimated Brass Relational Logit Model Parameters α and β , Hispanic origin population, 2010

	Total	(SE)	Male	(SE)	Female	(SE)
α	-0.1852153	0.018	-0.1491783	0.035	-0.1718201	0.010
β	1.0140820	0.005	1.0143530	0.009	1.0234560	0.003

Note: SE are Standard Errors
SOURCE: CDC/NCHS, National Vital Statistics System.

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

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

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:

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

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. Once 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

$$l_x = l_{x-1}(1 - q_{x-1}) \quad [15]$$

Decrement function (d_x)

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

$$d_x = l_x - l_{x+1} = l_x q_x \quad [16]$$

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 :

$$T_x = \sum_{x=0}^{\infty} L_x \tag{19}$$

Life expectancy at age x (e_x)

Life expectancy at exact age x is calculated as

$$e_x = \frac{T_x}{l_x} \tag{20}$$

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 ${}_nq_x$, ${}_nd_x$, and ${}_nL_x$ 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 2010 U.S. total population abridged from Table 1.

Table VI. Life table for the total population: United States, 2010

Age	Probability of dying between ages x to $x+n$	Number surviving to age x	Number dying between ages x to $x+n$	Person-years lived between ages x to $x+n$	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	0.006123	100,000	612	99,465	7,866,027	78.7
1-5	0.001071	99,388	106	397,294	7,766,561	78.1
5-10	0.000573	99,281	57	496,250	7,369,267	74.2
10-15	0.000708	99,224	70	495,989	6,873,017	69.3
15-20	0.002463	99,154	244	495,240	6,377,028	64.3
20-25	0.004317	98,910	427	493,529	5,881,789	59.5
25-30	0.004791	98,483	472	491,249	5,388,260	54.7
30-35	0.005497	98,011	539	488,744	4,897,011	50.0
35-40	0.006913	97,472	674	485,753	4,408,267	45.2
40-45	0.009979	96,798	966	481,758	3,922,514	40.5
45-50	0.016044	95,833	1,538	475,584	3,440,756	35.9
50-55	0.024343	94,295	2,295	466,066	2,965,173	31.4
55-60	0.035106	92,000	3,230	452,347	2,499,106	27.2
60-65	0.049847	88,770	4,425	433,348	2,046,759	23.1
65-70	0.074406	84,345	6,276	406,912	1,613,411	19.1
70-75	0.112315	78,069	8,768	369,612	1,206,499	15.5
75-80	0.174782	69,301	12,113	317,694	836,886	12.1
80-85	0.274384	57,188	15,692	248,038	519,193	9.1
85-90	0.430820	41,497	17,878	162,723	271,155	6.5
90-95	0.615282	23,619	14,532	79,220	108,432	4.6
95-100	0.783397	9,087	7,119	24,670	29,211	3.2
100+	1.000000	1,968	1,968	4,542	4,542	2.3

SOURCE: CDC/NCHS, National Vital Statistics System.

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