

United States Life Tables, 2010

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Abstract

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

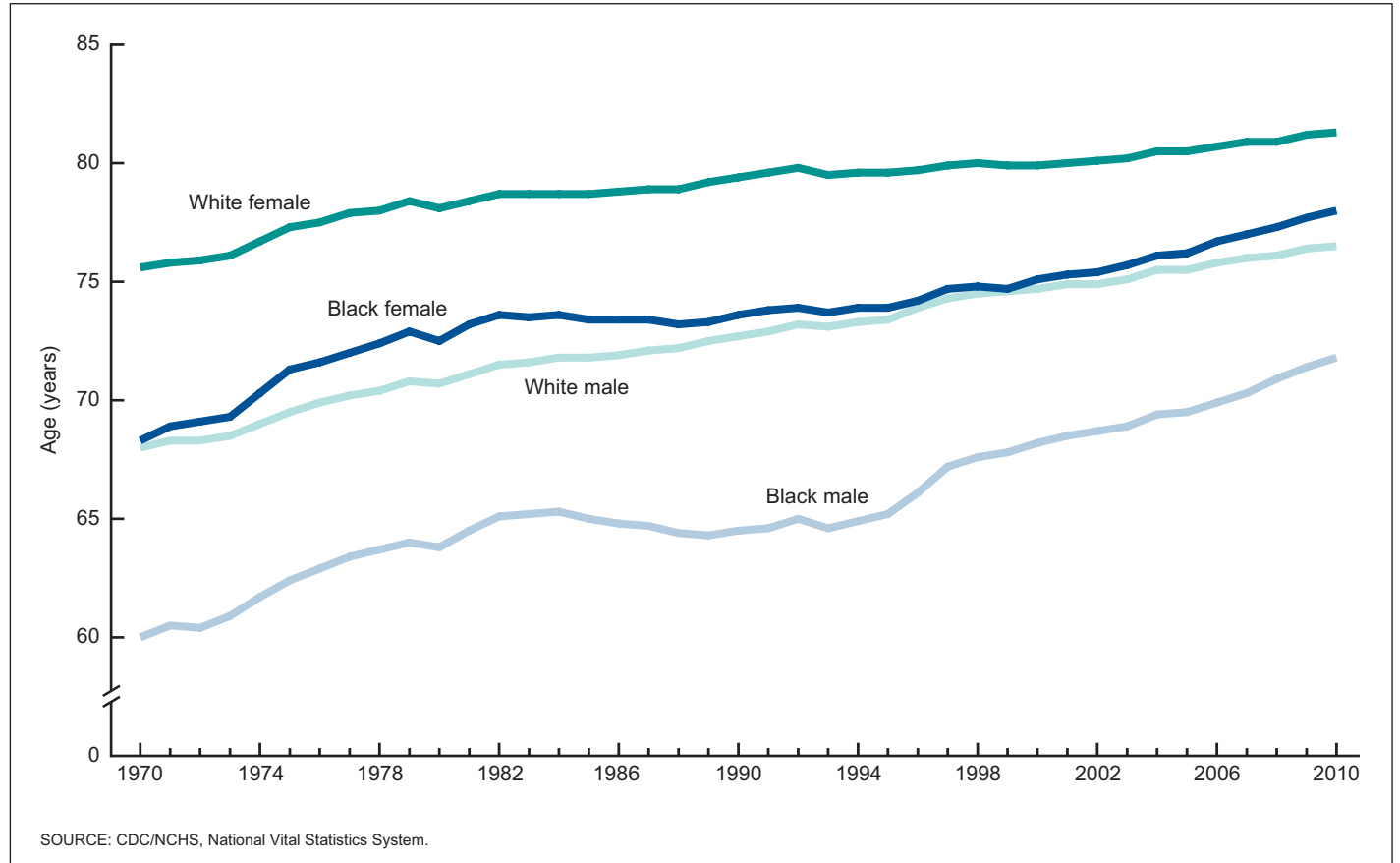


Figure 1. Life expectancy at birth by race and sex: 1970-2010

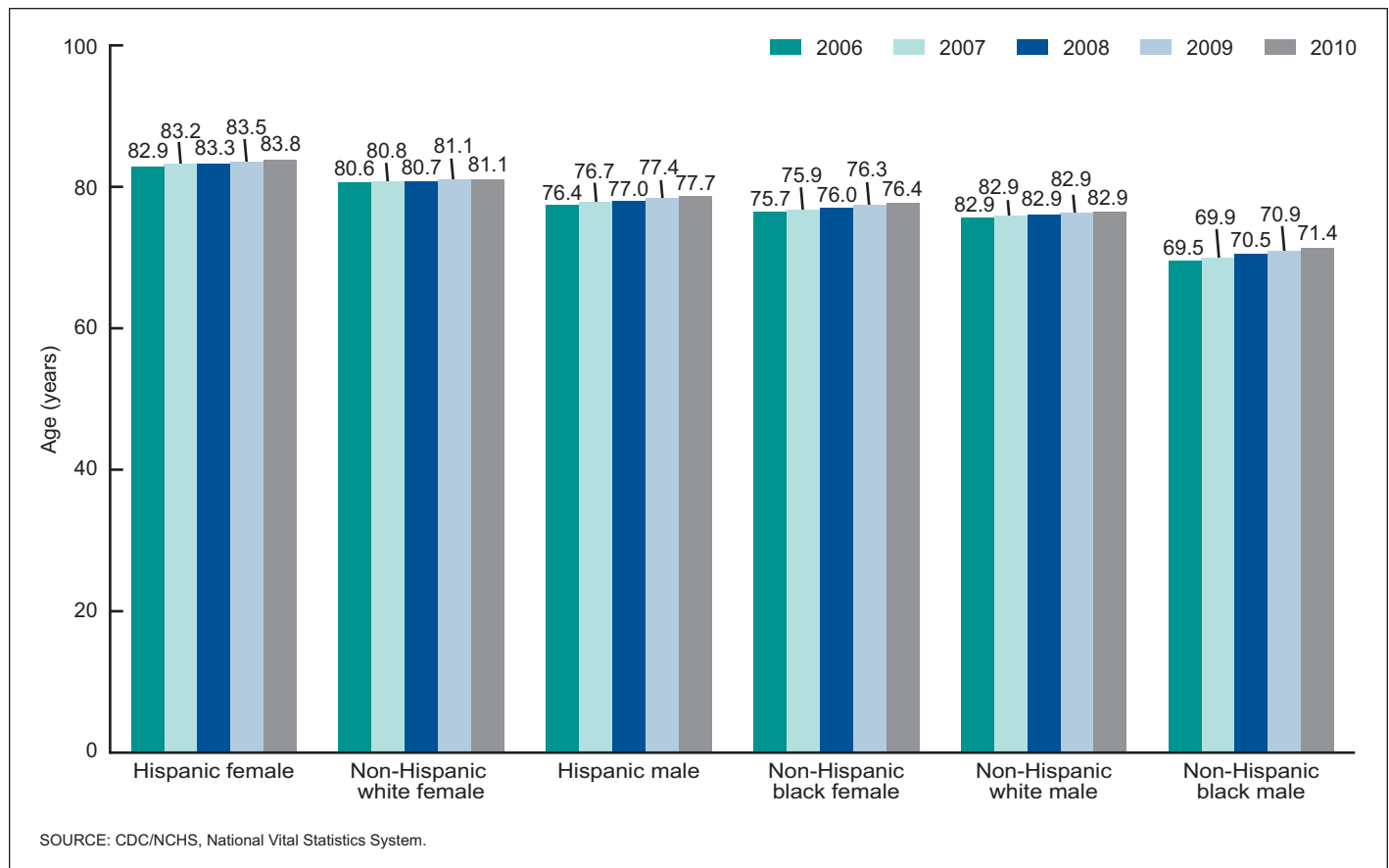


Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006-2010

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

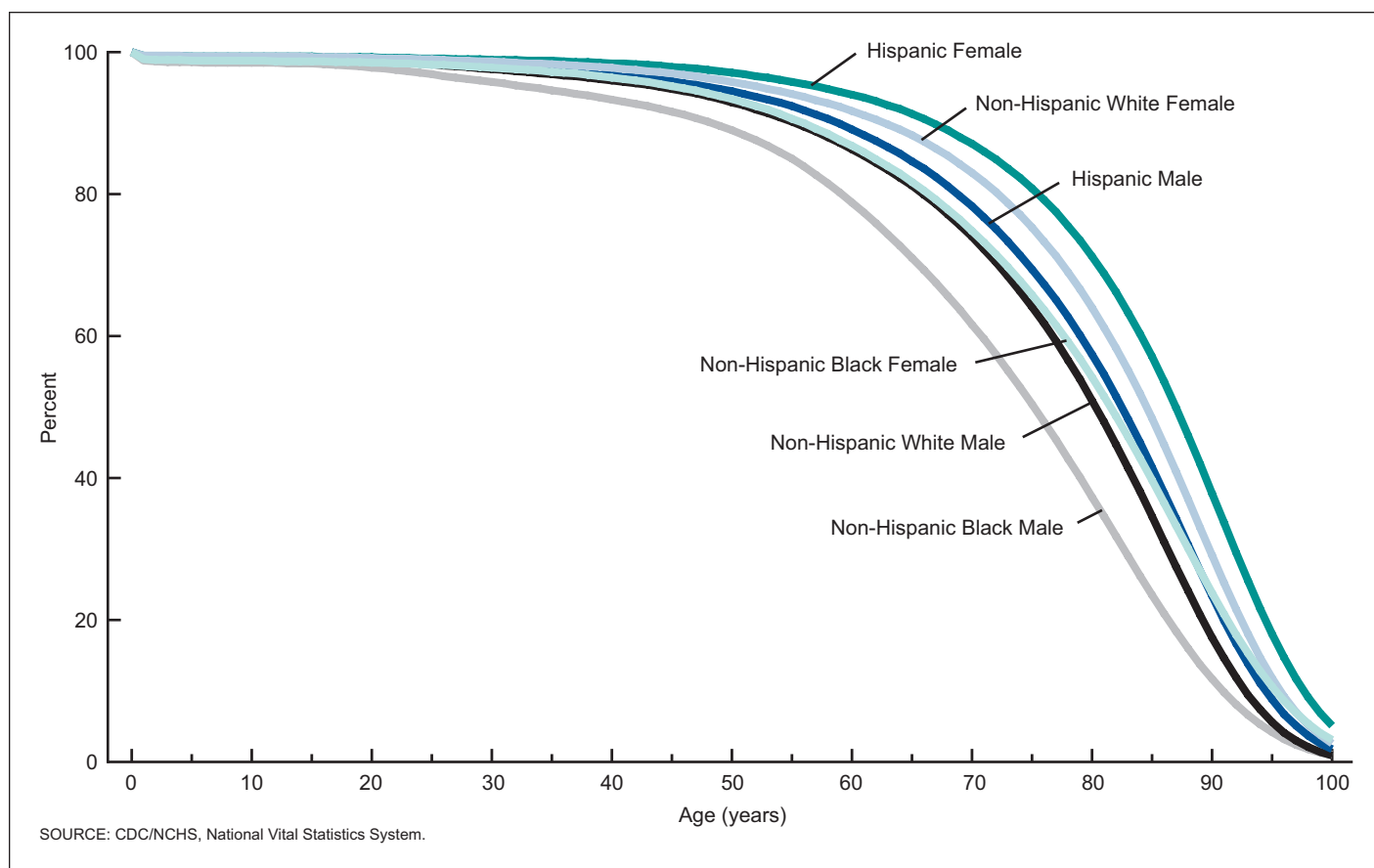


Figure 3. Percent surviving by Hispanic origin, race, age and sex: United States, 2010

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, 2010

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	0.01	100,000	612	99,465	7,866,027	78.7
1-2	0.00	99,388	43	99,366	7,766,561	78.1
2-3	0.00	99,345	27	99,331	7,667,195	77.2
3-4	0.00	99,318	21	99,307	7,567,864	76.2
4-5	0.00	99,297	16	99,289	7,468,556	75.2
5-6	0.00	99,281	14	99,274	7,369,267	74.2
6-7	0.00	99,267	13	99,260	7,269,993	73.2
7-8	0.00	99,254	11	99,249	7,170,733	72.2
8-9	0.00	99,243	10	99,238	7,071,484	71.3
9-10	0.00	99,233	9	99,229	6,972,246	70.3
10-11	0.00	99,224	8	99,220	6,873,017	69.3
11-12	0.00	99,216	9	99,212	6,773,797	68.3
12-13	0.00	99,208	12	99,202	6,674,585	67.3
13-14	0.00	99,196	17	99,188	6,575,383	66.3
14-15	0.00	99,179	25	99,167	6,476,195	65.3
15-16	0.00	99,154	33	99,138	6,377,028	64.3
16-17	0.00	99,121	41	99,101	6,277,891	63.3
17-18	0.00	99,080	49	99,056	6,178,790	62.4
18-19	0.00	99,032	57	99,003	6,079,734	61.4
19-20	0.00	98,975	65	98,942	5,980,731	60.4
20-21	0.00	98,910	74	98,873	5,881,789	59.5
21-22	0.00	98,836	82	98,795	5,782,916	58.5
22-23	0.00	98,754	88	98,710	5,684,120	57.6
23-24	0.00	98,666	91	98,621	5,585,410	56.6
24-25	0.00	98,575	92	98,529	5,486,789	55.7
25-26	0.00	98,483	92	98,437	5,388,260	54.7
26-27	0.00	98,391	93	98,344	5,289,824	53.8
27-28	0.00	98,298	94	98,251	5,191,479	52.8
28-29	0.00	98,204	95	98,157	5,093,228	51.9
29-30	0.00	98,109	98	98,060	4,995,071	50.9
30-31	0.00	98,011	101	97,961	4,897,011	50.0
31-32	0.00	97,910	104	97,858	4,799,051	49.0
32-33	0.00	97,806	108	97,752	4,701,193	48.1
33-34	0.00	97,699	111	97,643	4,603,440	47.1
34-35	0.00	97,587	115	97,530	4,505,797	46.2
35-36	0.00	97,472	120	97,412	4,408,267	45.2
36-37	0.00	97,352	127	97,289	4,310,855	44.3
37-38	0.00	97,225	134	97,158	4,213,567	43.3
38-39	0.00	97,091	142	97,020	4,116,408	42.4
39-40	0.00	96,949	151	96,874	4,019,388	41.5
40-41	0.00	96,798	161	96,718	3,922,514	40.5
41-42	0.00	96,637	173	96,551	3,825,796	39.6
42-43	0.00	96,464	189	96,370	3,729,245	38.7
43-44	0.00	96,275	210	96,170	3,632,875	37.7
44-45	0.00	96,065	233	95,949	3,536,705	36.8
45-46	0.00	95,833	256	95,704	3,440,756	35.9
46-47	0.00	95,576	280	95,436	3,345,052	35.0
47-48	0.00	95,296	305	95,143	3,249,616	34.1
48-49	0.00	94,990	333	94,824	3,154,473	33.2
49-50	0.00	94,658	363	94,476	3,059,649	32.3
50-51	0.00	94,295	394	94,098	2,965,173	31.4
51-52	0.00	93,901	426	93,688	2,871,075	30.6
52-53	0.00	93,475	458	93,246	2,777,386	29.7
53-54	0.01	93,017	491	92,771	2,684,140	28.9
54-55	0.01	92,526	526	92,263	2,591,369	28.0
55-56	0.01	92,000	563	91,718	2,499,106	27.2
56-57	0.01	91,437	603	91,136	2,407,388	26.3
57-58	0.01	90,834	644	90,512	2,316,253	25.5
58-59	0.01	90,190	688	89,846	2,225,741	24.7
59-60	0.01	89,502	732	89,136	2,135,895	23.9
60-61	0.01	88,770	778	88,381	2,046,759	23.1
61-62	0.01	87,992	827	87,578	1,958,378	22.3

Table 1. Life table for the total population: United States, 2010—Con.

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.....	0.01	87,165	879	86,725	1,870,800	21.5
63-64.....	0.01	86,286	937	85,817	1,784,075	20.7
64-65.....	0.01	85,348	1,004	84,847	1,698,258	19.9
65-66.....	0.01	84,345	1,080	83,805	1,613,411	19.1
66-67.....	0.01	83,264	1,167	82,681	1,529,606	18.4
67-68.....	0.02	82,098	1,255	81,470	1,446,925	17.6
68-69.....	0.02	80,843	1,342	80,172	1,365,455	16.9
69-70.....	0.02	79,501	1,431	78,785	1,285,283	16.2
70-71.....	0.02	78,069	1,526	77,306	1,206,499	15.5
71-72.....	0.02	76,543	1,630	75,728	1,129,192	14.8
72-73.....	0.02	74,913	1,744	74,041	1,053,464	14.1
73-74.....	0.03	73,169	1,868	72,236	979,423	13.4
74-75.....	0.03	71,302	2,001	70,301	907,188	12.7
75-76.....	0.03	69,301	2,136	68,233	836,886	12.1
76-77.....	0.03	67,165	2,268	66,031	768,654	11.4
77-78.....	0.04	64,896	2,418	63,688	702,623	10.8
78-79.....	0.04	62,479	2,570	61,194	638,935	10.2
79-80.....	0.05	59,909	2,721	58,549	577,741	9.6
80-81.....	0.05	57,188	2,868	55,754	519,193	9.1
81-82.....	0.06	54,321	3,012	52,815	463,438	8.5
82-83.....	0.06	51,309	3,144	49,737	410,624	8.0
83-84.....	0.07	48,165	3,264	46,533	360,887	7.5
84-85.....	0.08	44,901	3,404	43,199	314,354	7.0
85-86.....	0.09	41,497	3,540	39,727	271,155	6.5
86-87.....	0.09	37,956	3,605	36,154	231,429	6.1
87-88.....	0.11	34,351	3,625	32,539	195,275	5.7
88-89.....	0.12	30,726	3,595	28,929	162,736	5.3
89-90.....	0.13	27,131	3,512	25,375	133,807	4.9
90-91.....	0.14	23,619	3,375	21,932	108,432	4.6
91-92.....	0.16	20,245	3,184	18,653	86,500	4.3
92-93.....	0.17	17,061	2,946	15,588	67,847	4.0
93-94.....	0.19	14,115	2,668	12,781	52,259	3.7
94-95.....	0.21	11,447	2,361	10,267	39,478	3.4
95-96.....	0.22	9,087	2,038	8,068	29,211	3.2
96-97.....	0.24	7,049	1,713	6,192	21,144	3.0
97-98.....	0.26	5,335	1,401	4,635	14,951	2.8
98-99.....	0.28	3,935	1,112	3,379	10,316	2.6
99-100.....	0.30	2,823	855	2,396	6,937	2.5
100 and over.....	1.00	1,968	1,968	4,542	4,542	2.3

Table 2. Life table for males: United States, 2010

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	0.01	100,000	667	99,419	7,619,510	76.2
1-2	0.00	99,333	45	99,311	7,520,090	75.7
2-3	0.00	99,289	32	99,273	7,420,779	74.7
3-4	0.00	99,257	25	99,245	7,321,507	73.8
4-5	0.00	99,232	18	99,223	7,222,262	72.8
5-6	0.00	99,215	17	99,206	7,123,039	71.8
6-7	0.00	99,198	15	99,191	7,023,832	70.8
7-8	0.00	99,183	13	99,177	6,924,642	69.8
8-9	0.00	99,171	11	99,165	6,825,465	68.8
9-10	0.00	99,160	9	99,156	6,726,299	67.8
10-11	0.00	99,151	7	99,148	6,627,144	66.8
11-12	0.00	99,144	8	99,140	6,527,996	65.8
12-13	0.00	99,136	12	99,130	6,428,856	64.8
13-14	0.00	99,124	21	99,114	6,329,726	63.9
14-15	0.00	99,103	32	99,087	6,230,612	62.9
15-16	0.00	99,071	45	99,049	6,131,525	61.9
16-17	0.00	99,026	56	98,998	6,032,476	60.9
17-18	0.00	98,970	68	98,936	5,933,478	60.0
18-19	0.00	98,902	81	98,861	5,834,542	59.0
19-20	0.00	98,821	93	98,774	5,735,681	58.0
20-21	0.00	98,727	107	98,674	5,636,907	57.1
21-22	0.00	98,620	120	98,560	5,538,233	56.2
22-23	0.00	98,501	129	98,436	5,439,672	55.2
23-24	0.00	98,371	133	98,305	5,341,237	54.3
24-25	0.00	98,238	133	98,171	5,242,932	53.4
25-26	0.00	98,105	132	98,039	5,144,760	52.4
26-27	0.00	97,973	132	97,907	5,046,722	51.5
27-28	0.00	97,841	132	97,775	4,948,815	50.6
28-29	0.00	97,709	133	97,643	4,851,040	49.6
29-30	0.00	97,576	135	97,509	4,753,397	48.7
30-31	0.00	97,441	138	97,373	4,655,888	47.8
31-32	0.00	97,304	140	97,233	4,558,516	46.8
32-33	0.00	97,163	143	97,091	4,461,282	45.9
33-34	0.00	97,020	146	96,947	4,364,191	45.0
34-35	0.00	96,874	149	96,799	4,267,244	44.0
35-36	0.00	96,724	154	96,647	4,170,445	43.1
36-37	0.00	96,570	160	96,490	4,073,798	42.2
37-38	0.00	96,410	168	96,326	3,977,307	41.3
38-39	0.00	96,243	176	96,154	3,880,981	40.3
39-40	0.00	96,066	186	95,973	3,784,827	39.4
40-41	0.00	95,880	198	95,781	3,688,853	38.5
41-42	0.00	95,682	212	95,576	3,593,072	37.6
42-43	0.00	95,470	231	95,354	3,497,496	36.6
43-44	0.00	95,239	256	95,111	3,402,142	35.7
44-45	0.00	94,983	284	94,841	3,307,031	34.8
45-46	0.00	94,699	313	94,543	3,212,190	33.9
46-47	0.00	94,387	342	94,216	3,117,647	33.0
47-48	0.00	94,045	373	93,858	3,023,431	32.1
48-49	0.00	93,671	407	93,468	2,929,573	31.3
49-50	0.00	93,265	443	93,043	2,836,105	30.4
50-51	0.01	92,822	480	92,582	2,743,061	29.6
51-52	0.01	92,342	519	92,083	2,650,479	28.7
52-53	0.01	91,823	559	91,544	2,558,397	27.9
53-54	0.01	91,264	603	90,962	2,466,853	27.0
54-55	0.01	90,660	650	90,335	2,375,891	26.2
55-56	0.01	90,010	701	89,659	2,285,556	25.4
56-57	0.01	89,309	755	88,931	2,195,897	24.6
57-58	0.01	88,554	808	88,150	2,106,965	23.8
58-59	0.01	87,746	858	87,317	2,018,815	23.0
59-60	0.01	86,889	905	86,436	1,931,498	22.2
60-61	0.01	85,984	952	85,507	1,845,062	21.5
61-62	0.01	85,031	1,003	84,530	1,759,554	20.7

Table 2. Life table for males: United States, 2010—Con.

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.....	0.01	84,029	1,057	83,500	1,675,024	19.9
63-64.....	0.01	82,972	1,119	82,412	1,591,524	19.2
64-65.....	0.01	81,853	1,190	81,258	1,509,111	18.4
65-66.....	0.02	80,663	1,273	80,026	1,427,853	17.7
66-67.....	0.02	79,390	1,365	78,707	1,347,827	17.0
67-68.....	0.02	78,025	1,459	77,295	1,269,120	16.3
68-69.....	0.02	76,566	1,550	75,790	1,191,825	15.6
69-70.....	0.02	75,015	1,644	74,193	1,116,035	14.9
70-71.....	0.02	73,371	1,741	72,501	1,041,841	14.2
71-72.....	0.03	71,631	1,843	70,709	969,340	13.5
72-73.....	0.03	69,787	1,959	68,808	898,631	12.9
73-74.....	0.03	67,828	2,086	66,785	829,824	12.2
74-75.....	0.03	65,742	2,223	64,631	763,039	11.6
75-76.....	0.04	63,519	2,356	62,341	698,408	11.0
76-77.....	0.04	61,163	2,480	59,923	636,067	10.4
77-78.....	0.04	58,684	2,622	57,373	576,144	9.8
78-79.....	0.05	56,062	2,760	54,682	518,771	9.3
79-80.....	0.05	53,302	2,897	51,854	464,089	8.7
80-81.....	0.06	50,405	3,030	48,890	412,236	8.2
81-82.....	0.07	47,375	3,154	45,798	363,346	7.7
82-83.....	0.07	44,221	3,248	42,597	317,547	7.2
83-84.....	0.08	40,973	3,307	39,320	274,950	6.7
84-85.....	0.09	37,666	3,419	35,957	235,630	6.3
85-86.....	0.10	34,247	3,462	32,516	199,674	5.8
86-87.....	0.11	30,785	3,458	29,056	167,157	5.4
87-88.....	0.12	27,327	3,403	25,626	138,101	5.1
88-89.....	0.14	23,924	3,296	22,276	112,475	4.7
89-90.....	0.15	20,628	3,135	19,061	90,199	4.4
90-91.....	0.17	17,493	2,925	16,030	71,139	4.1
91-92.....	0.18	14,568	2,672	13,232	55,108	3.8
92-93.....	0.20	11,895	2,386	10,702	41,877	3.5
93-94.....	0.22	9,509	2,079	8,470	31,175	3.3
94-95.....	0.24	7,430	1,764	6,548	22,705	3.1
95-96.....	0.26	5,666	1,456	4,938	16,157	2.9
96-97.....	0.28	4,210	1,166	3,627	11,219	2.7
97-98.....	0.30	3,043	906	2,591	7,593	2.5
98-99.....	0.32	2,138	681	1,797	5,002	2.3
99-100.....	0.34	1,457	494	1,210	3,205	2.2
100 and over.....	1.00	963	963	1,995	1,995	2.1

Table 3. Life table for females: United States, 2010

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	0.01	100,000	555	99,514	8,104,166	81.0
1-2	0.00	99,445	41	99,424	8,004,653	80.5
2-3	0.00	99,404	22	99,393	7,905,228	79.5
3-4	0.00	99,382	17	99,373	7,805,835	78.5
4-5	0.00	99,365	14	99,358	7,706,462	77.6
5-6	0.00	99,351	12	99,345	7,607,104	76.6
6-7	0.00	99,339	11	99,334	7,507,759	75.6
7-8	0.00	99,328	10	99,323	7,408,425	74.6
8-9	0.00	99,319	9	99,314	7,309,102	73.6
9-10	0.00	99,310	9	99,305	7,209,788	72.6
10-11	0.00	99,301	9	99,297	7,110,483	71.6
11-12	0.00	99,292	9	99,288	7,011,186	70.6
12-13	0.00	99,283	11	99,278	6,911,898	69.6
13-14	0.00	99,272	14	99,265	6,812,621	68.6
14-15	0.00	99,258	17	99,250	6,713,356	67.6
15-16	0.00	99,241	21	99,231	6,614,106	66.6
16-17	0.00	99,220	24	99,208	6,514,875	65.7
17-18	0.00	99,196	28	99,182	6,415,667	64.7
18-19	0.00	99,168	31	99,152	6,316,485	63.7
19-20	0.00	99,137	35	99,119	6,217,332	62.7
20-21	0.00	99,102	38	99,083	6,118,213	61.7
21-22	0.00	99,064	42	99,042	6,019,130	60.8
22-23	0.00	99,021	45	98,999	5,920,088	59.8
23-24	0.00	98,976	47	98,953	5,821,089	58.8
24-25	0.00	98,929	49	98,904	5,722,136	57.8
25-26	0.00	98,880	51	98,854	5,623,232	56.9
26-27	0.00	98,829	53	98,803	5,524,377	55.9
27-28	0.00	98,776	55	98,749	5,425,575	54.9
28-29	0.00	98,722	57	98,693	5,326,826	54.0
29-30	0.00	98,664	60	98,634	5,228,133	53.0
30-31	0.00	98,604	63	98,573	5,129,498	52.0
31-32	0.00	98,541	67	98,508	5,030,925	51.1
32-33	0.00	98,474	71	98,439	4,932,418	50.1
33-34	0.00	98,403	76	98,365	4,833,979	49.1
34-35	0.00	98,328	81	98,287	4,735,613	48.2
35-36	0.00	98,247	86	98,204	4,637,326	47.2
36-37	0.00	98,161	93	98,114	4,539,122	46.2
37-38	0.00	98,068	100	98,018	4,441,008	45.3
38-39	0.00	97,967	107	97,914	4,342,990	44.3
39-40	0.00	97,860	115	97,803	4,245,077	43.4
40-41	0.00	97,745	124	97,683	4,147,274	42.4
41-42	0.00	97,621	134	97,554	4,049,591	41.5
42-43	0.00	97,487	147	97,414	3,952,037	40.5
43-44	0.00	97,340	163	97,259	3,854,623	39.6
44-45	0.00	97,177	181	97,087	3,757,364	38.7
45-46	0.00	96,996	200	96,896	3,660,278	37.7
46-47	0.00	96,796	218	96,687	3,563,382	36.8
47-48	0.00	96,578	238	96,459	3,466,695	35.9
48-49	0.00	96,340	259	96,210	3,370,236	35.0
49-50	0.00	96,081	283	95,940	3,274,025	34.1
50-51	0.00	95,798	308	95,644	3,178,086	33.2
51-52	0.00	95,491	333	95,324	3,082,441	32.3
52-53	0.00	95,157	357	94,979	2,987,117	31.4
53-54	0.00	94,800	380	94,610	2,892,139	30.5
54-55	0.00	94,420	402	94,219	2,797,529	29.6
55-56	0.00	94,018	426	93,805	2,703,310	28.8
56-57	0.00	93,592	452	93,366	2,609,505	27.9
57-58	0.01	93,140	483	92,898	2,516,140	27.0
58-59	0.01	92,656	520	92,396	2,423,242	26.2
59-60	0.01	92,136	561	91,855	2,330,846	25.3
60-61	0.01	91,575	606	91,272	2,238,990	24.4
61-62	0.01	90,969	652	90,643	2,147,719	23.6

Table 3. Life table for females: United States, 2010—Con.

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.....	0.01	90,317	702	89,966	2,057,076	22.8
63-64.....	0.01	89,615	757	89,237	1,967,110	22.0
64-65.....	0.01	88,858	818	88,449	1,877,873	21.1
65-66.....	0.01	88,040	890	87,595	1,789,424	20.3
66-67.....	0.01	87,150	972	86,664	1,701,829	19.5
67-68.....	0.01	86,178	1,056	85,650	1,615,165	18.7
68-69.....	0.01	85,123	1,139	84,553	1,529,515	18.0
69-70.....	0.01	83,984	1,224	83,372	1,444,961	17.2
70-71.....	0.02	82,760	1,317	82,102	1,361,589	16.5
71-72.....	0.02	81,444	1,423	80,732	1,279,487	15.7
72-73.....	0.02	80,021	1,535	79,254	1,198,755	15.0
73-74.....	0.02	78,486	1,659	77,657	1,119,501	14.3
74-75.....	0.02	76,827	1,790	75,932	1,041,845	13.6
75-76.....	0.03	75,037	1,930	74,072	965,913	12.9
76-77.....	0.03	73,107	2,074	72,070	891,841	12.2
77-78.....	0.03	71,033	2,234	69,916	819,771	11.5
78-79.....	0.03	68,799	2,405	67,597	749,855	10.9
79-80.....	0.04	66,394	2,574	65,107	682,258	10.3
80-81.....	0.04	63,820	2,741	62,450	617,151	9.7
81-82.....	0.05	61,079	2,912	59,623	554,702	9.1
82-83.....	0.05	58,167	3,085	56,625	495,078	8.5
83-84.....	0.06	55,082	3,268	53,448	438,454	8.0
84-85.....	0.07	51,814	3,470	50,079	385,006	7.4
85-86.....	0.08	48,344	3,653	46,518	334,927	6.9
86-87.....	0.08	44,691	3,789	42,797	288,409	6.5
87-88.....	0.09	40,903	3,883	38,961	245,613	6.0
88-89.....	0.11	37,019	3,927	35,056	206,652	5.6
89-90.....	0.12	33,092	3,914	31,135	171,596	5.2
90-91.....	0.13	29,178	3,838	27,259	140,461	4.8
91-92.....	0.15	25,340	3,697	23,491	113,202	4.5
92-93.....	0.16	21,643	3,492	19,896	89,711	4.1
93-94.....	0.18	18,150	3,229	16,536	69,814	3.8
94-95.....	0.20	14,922	2,917	13,463	53,278	3.6
95-96.....	0.21	12,005	2,569	10,721	39,815	3.3
96-97.....	0.23	9,436	2,203	8,335	29,094	3.1
97-98.....	0.25	7,233	1,835	6,316	20,759	2.9
98-99.....	0.27	5,399	1,482	4,658	14,443	2.7
99-100.....	0.30	3,917	1,159	3,338	9,785	2.5
100 and over.....	1.00	2,758	2,758	6,448	6,448	2.3

Table 4. Life table for the white population: United States, 2010

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	0.01	100,000	518	99,548	7,894,144	78.9
1-2	0.00	99,482	39	99,463	7,794,597	78.4
2-3	0.00	99,443	25	99,431	7,695,134	77.4
3-4	0.00	99,419	20	99,408	7,595,703	76.4
4-5	0.00	99,398	15	99,391	7,496,295	75.4
5-6	0.00	99,384	14	99,377	7,396,904	74.4
6-7	0.00	99,370	12	99,364	7,297,527	73.4
7-8	0.00	99,358	11	99,353	7,198,162	72.4
8-9	0.00	99,347	10	99,343	7,098,810	71.5
9-10	0.00	99,338	8	99,334	6,999,467	70.5
10-11	0.00	99,330	8	99,326	6,900,133	69.5
11-12	0.00	99,322	8	99,318	6,800,808	68.5
12-13	0.00	99,314	11	99,308	6,701,490	67.5
13-14	0.00	99,303	16	99,294	6,602,182	66.5
14-15	0.00	99,286	24	99,274	6,502,887	65.5
15-16	0.00	99,262	31	99,247	6,403,613	64.5
16-17	0.00	99,231	39	99,212	6,304,366	63.5
17-18	0.00	99,192	46	99,169	6,205,155	62.6
18-19	0.00	99,146	54	99,119	6,105,986	61.6
19-20	0.00	99,092	62	99,061	6,006,867	60.6
20-21	0.00	99,030	70	98,995	5,907,806	59.7
21-22	0.00	98,960	78	98,920	5,808,811	58.7
22-23	0.00	98,881	84	98,839	5,709,891	57.7
23-24	0.00	98,797	87	98,753	5,611,052	56.8
24-25	0.00	98,710	88	98,665	5,512,299	55.8
25-26	0.00	98,621	89	98,577	5,413,633	54.9
26-27	0.00	98,532	90	98,488	5,315,057	53.9
27-28	0.00	98,443	91	98,397	5,216,569	53.0
28-29	0.00	98,352	92	98,306	5,118,172	52.0
29-30	0.00	98,260	95	98,213	5,019,866	51.1
30-31	0.00	98,165	97	98,117	4,921,653	50.1
31-32	0.00	98,068	100	98,018	4,823,536	49.2
32-33	0.00	97,968	104	97,916	4,725,519	48.2
33-34	0.00	97,864	107	97,810	4,627,603	47.3
34-35	0.00	97,757	111	97,701	4,529,793	46.3
35-36	0.00	97,646	116	97,588	4,432,092	45.4
36-37	0.00	97,530	122	97,469	4,334,504	44.4
37-38	0.00	97,407	129	97,343	4,237,035	43.5
38-39	0.00	97,278	137	97,210	4,139,692	42.6
39-40	0.00	97,141	146	97,068	4,042,483	41.6
40-41	0.00	96,995	156	96,917	3,945,414	40.7
41-42	0.00	96,840	167	96,756	3,848,497	39.7
42-43	0.00	96,672	183	96,581	3,751,741	38.8
43-44	0.00	96,489	203	96,387	3,655,160	37.9
44-45	0.00	96,285	226	96,172	3,558,773	37.0
45-46	0.00	96,059	250	95,934	3,462,601	36.0
46-47	0.00	95,809	273	95,673	3,366,667	35.1
47-48	0.00	95,536	297	95,387	3,270,994	34.2
48-49	0.00	95,239	323	95,077	3,175,607	33.3
49-50	0.00	94,915	351	94,740	3,080,530	32.5
50-51	0.00	94,564	381	94,374	2,985,791	31.6
51-52	0.00	94,183	411	93,978	2,891,417	30.7
52-53	0.00	93,772	441	93,552	2,797,439	29.8
53-54	0.01	93,331	472	93,095	2,703,888	29.0
54-55	0.01	92,859	504	92,606	2,610,793	28.1
55-56	0.01	92,354	538	92,085	2,518,187	27.3
56-57	0.01	91,816	576	91,528	2,426,102	26.4
57-58	0.01	91,240	616	90,932	2,334,573	25.6
58-59	0.01	90,625	659	90,295	2,243,641	24.8
59-60	0.01	89,965	705	89,613	2,153,346	23.9
60-61	0.01	89,261	752	88,885	2,063,733	23.1
61-62	0.01	88,509	802	88,108	1,974,848	22.3

Table 4. Life table for the white population: United States, 2010—Con.

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.....	0.01	87,707	855	87,279	1,886,740	21.5
63-64.....	0.01	86,852	915	86,395	1,799,461	20.7
64-65.....	0.01	85,937	982	85,446	1,713,067	19.9
65-66.....	0.01	84,955	1,061	84,425	1,627,620	19.2
66-67.....	0.01	83,894	1,149	83,320	1,543,196	18.4
67-68.....	0.01	82,745	1,239	82,126	1,459,876	17.6
68-69.....	0.02	81,506	1,327	80,843	1,377,750	16.9
69-70.....	0.02	80,180	1,417	79,471	1,296,907	16.2
70-71.....	0.02	78,763	1,513	78,006	1,217,436	15.5
71-72.....	0.02	77,249	1,620	76,439	1,139,430	14.8
72-73.....	0.02	75,629	1,737	74,760	1,062,991	14.1
73-74.....	0.03	73,891	1,865	72,959	988,231	13.4
74-75.....	0.03	72,027	2,003	71,025	915,272	12.7
75-76.....	0.03	70,024	2,142	68,953	844,247	12.1
76-77.....	0.03	67,882	2,279	66,743	775,294	11.4
77-78.....	0.04	65,603	2,432	64,387	708,551	10.8
78-79.....	0.04	63,171	2,592	61,875	644,164	10.2
79-80.....	0.05	60,580	2,748	59,206	582,288	9.6
80-81.....	0.05	57,832	2,895	56,384	523,083	9.0
81-82.....	0.06	54,937	3,046	53,414	466,698	8.5
82-83.....	0.06	51,891	3,185	50,298	413,284	8.0
83-84.....	0.07	48,706	3,309	47,051	362,986	7.5
84-85.....	0.08	45,397	3,456	43,669	315,934	7.0
85-86.....	0.09	41,941	3,580	40,151	272,265	6.5
86-87.....	0.10	38,361	3,653	36,535	232,114	6.1
87-88.....	0.11	34,709	3,680	32,869	195,579	5.6
88-89.....	0.12	31,029	3,655	29,201	162,711	5.2
89-90.....	0.13	27,373	3,574	25,586	133,510	4.9
90-91.....	0.14	23,799	3,436	22,081	107,923	4.5
91-92.....	0.16	20,363	3,242	18,742	85,843	4.2
92-93.....	0.18	17,121	2,997	15,622	67,101	3.9
93-94.....	0.19	14,124	2,710	12,769	51,478	3.6
94-95.....	0.21	11,414	2,393	10,218	38,709	3.4
95-96.....	0.23	9,022	2,059	7,992	28,491	3.2
96-97.....	0.25	6,963	1,724	6,101	20,499	2.9
97-98.....	0.27	5,239	1,402	4,538	14,398	2.7
98-99.....	0.29	3,837	1,105	3,285	9,860	2.6
99-100.....	0.31	2,732	844	2,310	6,575	2.4
100 and over.....	1.00	1,888	1,888	4,265	4,265	2.3

Table 5. Life table for white males: United States, 2010

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	0.01	100,000	562	99,509	7,654,399	76.5
1-2	0.00	99,438	40	99,418	7,554,890	76.0
2-3	0.00	99,398	29	99,383	7,455,472	75.0
3-4	0.00	99,369	24	99,357	7,356,089	74.0
4-5	0.00	99,345	17	99,336	7,256,732	73.0
5-6	0.00	99,328	16	99,320	7,157,395	72.1
6-7	0.00	99,313	14	99,306	7,058,075	71.1
7-8	0.00	99,299	12	99,293	6,958,769	70.1
8-9	0.00	99,287	10	99,282	6,859,477	69.1
9-10	0.00	99,277	8	99,272	6,760,195	68.1
10-11	0.00	99,268	7	99,265	6,660,923	67.1
11-12	0.00	99,261	8	99,257	6,561,658	66.1
12-13	0.00	99,253	12	99,247	6,462,401	65.1
13-14	0.00	99,241	20	99,231	6,363,154	64.1
14-15	0.00	99,222	30	99,206	6,263,922	63.1
15-16	0.00	99,191	41	99,171	6,164,716	62.1
16-17	0.00	99,150	52	99,124	6,065,545	61.2
17-18	0.00	99,098	63	99,066	5,966,421	60.2
18-19	0.00	99,035	75	98,997	5,867,355	59.2
19-20	0.00	98,959	87	98,916	5,768,358	58.3
20-21	0.00	98,872	101	98,822	5,669,443	57.3
21-22	0.00	98,771	113	98,715	5,570,621	56.4
22-23	0.00	98,658	122	98,598	5,471,906	55.5
23-24	0.00	98,537	126	98,474	5,373,309	54.5
24-25	0.00	98,411	127	98,347	5,274,835	53.6
25-26	0.00	98,284	126	98,221	5,176,487	52.7
26-27	0.00	98,158	126	98,095	5,078,267	51.7
27-28	0.00	98,031	127	97,968	4,980,172	50.8
28-29	0.00	97,905	128	97,841	4,882,204	49.9
29-30	0.00	97,777	130	97,712	4,784,363	48.9
30-31	0.00	97,647	132	97,581	4,686,651	48.0
31-32	0.00	97,515	135	97,447	4,589,070	47.1
32-33	0.00	97,380	137	97,311	4,491,623	46.1
33-34	0.00	97,242	140	97,172	4,394,312	45.2
34-35	0.00	97,102	144	97,030	4,297,140	44.3
35-36	0.00	96,958	149	96,884	4,200,109	43.3
36-37	0.00	96,810	155	96,732	4,103,225	42.4
37-38	0.00	96,655	162	96,574	4,006,493	41.5
38-39	0.00	96,492	171	96,407	3,909,919	40.5
39-40	0.00	96,321	181	96,231	3,813,512	39.6
40-41	0.00	96,140	192	96,044	3,717,281	38.7
41-42	0.00	95,948	206	95,845	3,621,237	37.7
42-43	0.00	95,742	225	95,629	3,525,392	36.8
43-44	0.00	95,517	250	95,392	3,429,763	35.9
44-45	0.00	95,267	278	95,128	3,334,371	35.0
45-46	0.00	94,989	307	94,835	3,239,243	34.1
46-47	0.00	94,681	337	94,513	3,144,408	33.2
47-48	0.00	94,345	367	94,161	3,049,895	32.3
48-49	0.00	93,978	399	93,778	2,955,734	31.5
49-50	0.00	93,579	433	93,363	2,861,955	30.6
50-51	0.01	93,146	468	92,912	2,768,593	29.7
51-52	0.01	92,678	505	92,426	2,675,681	28.9
52-53	0.01	92,173	543	91,902	2,583,255	28.0
53-54	0.01	91,630	584	91,339	2,491,353	27.2
54-55	0.01	91,047	627	90,733	2,400,015	26.4
55-56	0.01	90,420	674	90,083	2,309,281	25.5
56-57	0.01	89,746	723	89,385	2,219,198	24.7
57-58	0.01	89,024	773	88,637	2,129,813	23.9
58-59	0.01	88,251	822	87,840	2,041,176	23.1
59-60	0.01	87,429	870	86,994	1,953,336	22.3
60-61	0.01	86,559	918	86,099	1,866,342	21.6
61-62	0.01	85,640	970	85,155	1,780,243	20.8

Table 5. Life table for white males: United States, 2010—Con.

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.....	0.01	84,671	1,025	84,158	1,695,088	20.0
63-64.....	0.01	83,646	1,088	83,102	1,610,929	19.3
64-65.....	0.01	82,558	1,162	81,977	1,527,828	18.5
65-66.....	0.02	81,396	1,247	80,772	1,445,851	17.8
66-67.....	0.02	80,149	1,341	79,478	1,365,079	17.0
67-68.....	0.02	78,808	1,438	78,089	1,285,600	16.3
68-69.....	0.02	77,370	1,531	76,604	1,207,512	15.6
69-70.....	0.02	75,839	1,626	75,026	1,130,907	14.9
70-71.....	0.02	74,213	1,726	73,350	1,055,881	14.2
71-72.....	0.03	72,487	1,833	71,571	982,531	13.6
72-73.....	0.03	70,655	1,953	69,678	910,960	12.9
73-74.....	0.03	68,702	2,083	67,660	841,282	12.2
74-75.....	0.03	66,619	2,225	65,506	773,622	11.6
75-76.....	0.04	64,393	2,361	63,213	708,116	11.0
76-77.....	0.04	62,032	2,489	60,787	644,903	10.4
77-78.....	0.04	59,543	2,637	58,224	584,116	9.8
78-79.....	0.05	56,906	2,783	55,514	525,891	9.2
79-80.....	0.05	54,123	2,926	52,660	470,377	8.7
80-81.....	0.06	51,197	3,063	49,666	417,717	8.2
81-82.....	0.07	48,134	3,197	46,536	368,051	7.6
82-83.....	0.07	44,937	3,297	43,288	321,516	7.2
83-84.....	0.08	41,640	3,358	39,961	278,227	6.7
84-85.....	0.09	38,282	3,465	36,549	238,267	6.2
85-86.....	0.10	34,817	3,518	33,058	201,717	5.8
86-87.....	0.11	31,299	3,523	29,537	168,660	5.4
87-88.....	0.13	27,775	3,475	26,038	139,123	5.0
88-89.....	0.14	24,301	3,370	22,615	113,085	4.7
89-90.....	0.15	20,930	3,209	19,325	90,469	4.3
90-91.....	0.17	17,721	2,995	16,223	71,144	4.0
91-92.....	0.19	14,725	2,735	13,358	54,921	3.7
92-93.....	0.20	11,990	2,440	10,770	41,563	3.5
93-94.....	0.22	9,550	2,121	8,490	30,793	3.2
94-95.....	0.24	7,429	1,794	6,532	22,303	3.0
95-96.....	0.26	5,635	1,474	4,898	15,771	2.8
96-97.....	0.28	4,161	1,175	3,574	10,873	2.6
97-98.....	0.30	2,986	906	2,533	7,299	2.4
98-99.....	0.32	2,080	676	1,742	4,766	2.3
99-100.....	0.35	1,405	486	1,162	3,024	2.2
100 and over.....	1.00	918	918	1,862	1,862	2.0

Table 6. Life table for white females: United States, 2010

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	0.00	100,000	471	99,588	8,128,871	81.3
1-2	0.00	99,529	38	99,510	8,029,283	80.7
2-3	0.00	99,491	20	99,481	7,929,773	79.7
3-4	0.00	99,471	16	99,463	7,830,292	78.7
4-5	0.00	99,455	12	99,448	7,730,830	77.7
5-6	0.00	99,442	12	99,436	7,631,381	76.7
6-7	0.00	99,431	10	99,426	7,531,945	75.8
7-8	0.00	99,420	9	99,416	7,432,519	74.8
8-9	0.00	99,411	9	99,407	7,333,104	73.8
9-10	0.00	99,402	8	99,398	7,233,697	72.8
10-11	0.00	99,394	8	99,390	7,134,299	71.8
11-12	0.00	99,386	9	99,382	7,034,909	70.8
12-13	0.00	99,377	10	99,372	6,935,528	69.8
13-14	0.00	99,367	13	99,360	6,836,156	68.8
14-15	0.00	99,354	17	99,345	6,736,795	67.8
15-16	0.00	99,337	21	99,327	6,637,450	66.8
16-17	0.00	99,316	25	99,304	6,538,123	65.8
17-18	0.00	99,292	28	99,277	6,438,819	64.8
18-19	0.00	99,263	32	99,247	6,339,542	63.9
19-20	0.00	99,232	35	99,214	6,240,294	62.9
20-21	0.00	99,197	38	99,178	6,141,080	61.9
21-22	0.00	99,158	42	99,138	6,041,902	60.9
22-23	0.00	99,117	45	99,094	5,942,765	60.0
23-24	0.00	99,072	47	99,049	5,843,670	59.0
24-25	0.00	99,026	48	99,002	5,744,621	58.0
25-26	0.00	98,978	49	98,953	5,645,620	57.0
26-27	0.00	98,929	51	98,903	5,546,667	56.1
27-28	0.00	98,878	53	98,851	5,447,763	55.1
28-29	0.00	98,825	55	98,798	5,348,912	54.1
29-30	0.00	98,770	58	98,741	5,250,114	53.2
30-31	0.00	98,713	61	98,682	5,151,373	52.2
31-32	0.00	98,652	64	98,620	5,052,691	51.2
32-33	0.00	98,588	68	98,553	4,954,071	50.3
33-34	0.00	98,519	72	98,483	4,855,518	49.3
34-35	0.00	98,447	77	98,408	4,757,035	48.3
35-36	0.00	98,370	82	98,329	4,658,626	47.4
36-37	0.00	98,288	88	98,244	4,560,297	46.4
37-38	0.00	98,199	95	98,152	4,462,054	45.4
38-39	0.00	98,104	102	98,053	4,363,902	44.5
39-40	0.00	98,002	109	97,948	4,265,849	43.5
40-41	0.00	97,893	118	97,834	4,167,901	42.6
41-42	0.00	97,775	127	97,712	4,070,067	41.6
42-43	0.00	97,648	140	97,578	3,972,355	40.7
43-44	0.00	97,508	156	97,430	3,874,777	39.7
44-45	0.00	97,353	173	97,266	3,777,347	38.8
45-46	0.00	97,179	191	97,084	3,680,081	37.9
46-47	0.00	96,989	208	96,885	3,582,997	36.9
47-48	0.00	96,780	227	96,667	3,486,112	36.0
48-49	0.00	96,554	247	96,430	3,389,445	35.1
49-50	0.00	96,307	268	96,173	3,293,015	34.2
50-51	0.00	96,039	292	95,893	3,196,842	33.3
51-52	0.00	95,747	316	95,589	3,100,949	32.4
52-53	0.00	95,432	338	95,263	3,005,359	31.5
53-54	0.00	95,093	359	94,914	2,910,097	30.6
54-55	0.00	94,734	380	94,544	2,815,183	29.7
55-56	0.00	94,354	402	94,153	2,720,639	28.8
56-57	0.00	93,952	427	93,739	2,626,486	28.0
57-58	0.00	93,525	458	93,296	2,532,747	27.1
58-59	0.01	93,067	495	92,820	2,439,451	26.2
59-60	0.01	92,572	538	92,303	2,346,632	25.3
60-61	0.01	92,034	584	91,742	2,254,329	24.5
61-62	0.01	91,450	632	91,135	2,162,586	23.6

Table 6. Life table for white females: United States, 2010—Con.

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.....	0.01	90,819	683	90,477	2,071,452	22.8
63-64.....	0.01	90,136	739	89,767	1,980,974	22.0
64-65.....	0.01	89,397	801	88,997	1,891,208	21.2
65-66.....	0.01	88,597	874	88,160	1,802,211	20.3
66-67.....	0.01	87,723	957	87,244	1,714,051	19.5
67-68.....	0.01	86,766	1,042	86,245	1,626,807	18.7
68-69.....	0.01	85,724	1,125	85,162	1,540,562	18.0
69-70.....	0.01	84,599	1,210	83,994	1,455,401	17.2
70-71.....	0.02	83,390	1,304	82,738	1,371,406	16.4
71-72.....	0.02	82,086	1,412	81,379	1,288,669	15.7
72-73.....	0.02	80,673	1,527	79,909	1,207,289	15.0
73-74.....	0.02	79,146	1,654	78,319	1,127,380	14.2
74-75.....	0.02	77,492	1,790	76,597	1,049,061	13.5
75-76.....	0.03	75,701	1,935	74,734	972,465	12.8
76-77.....	0.03	73,767	2,083	72,725	897,730	12.2
77-78.....	0.03	71,684	2,247	70,560	825,005	11.5
78-79.....	0.03	69,437	2,424	68,225	754,445	10.9
79-80.....	0.04	67,013	2,598	65,714	686,220	10.2
80-81.....	0.04	64,415	2,763	63,034	620,506	9.6
81-82.....	0.05	61,652	2,938	60,183	557,472	9.0
82-83.....	0.05	58,715	3,120	57,154	497,288	8.5
83-84.....	0.06	55,594	3,310	53,939	440,134	7.9
84-85.....	0.07	52,285	3,518	50,526	386,195	7.4
85-86.....	0.08	48,767	3,688	46,923	335,669	6.9
86-87.....	0.09	45,079	3,833	43,162	288,746	6.4
87-88.....	0.10	41,246	3,935	39,278	245,584	6.0
88-89.....	0.11	37,311	3,985	35,318	206,306	5.5
89-90.....	0.12	33,325	3,976	31,337	170,988	5.1
90-91.....	0.13	29,349	3,901	27,399	139,651	4.8
91-92.....	0.15	25,448	3,757	23,569	112,252	4.4
92-93.....	0.16	21,691	3,547	19,917	88,683	4.1
93-94.....	0.18	18,144	3,275	16,506	68,765	3.8
94-95.....	0.20	14,869	2,952	13,392	52,259	3.5
95-96.....	0.22	11,916	2,593	10,620	38,867	3.3
96-97.....	0.24	9,323	2,215	8,216	28,247	3.0
97-98.....	0.26	7,108	1,836	6,190	20,031	2.8
98-99.....	0.28	5,272	1,474	4,535	13,841	2.6
99-100.....	0.30	3,798	1,145	3,226	9,306	2.5
100 and over.....	1.00	2,653	2,653	6,080	6,080	2.3

Table 7. Life table for the black population: United States, 2010

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	0.01	100,000	1,158	98,989	7,508,138	75.1
1-2	0.00	98,842	63	98,810	7,409,149	75.0
2-3	0.00	98,779	41	98,758	7,310,339	74.0
3-4	0.00	98,737	27	98,724	7,211,581	73.0
4-5	0.00	98,711	21	98,700	7,112,856	72.1
5-6	0.00	98,689	19	98,680	7,014,156	71.1
6-7	0.00	98,670	17	98,662	6,915,476	70.1
7-8	0.00	98,653	15	98,646	6,816,815	69.1
8-9	0.00	98,639	13	98,633	6,718,169	68.1
9-10	0.00	98,626	11	98,621	6,619,536	67.1
10-11	0.00	98,616	10	98,611	6,520,915	66.1
11-12	0.00	98,606	11	98,600	6,422,304	65.1
12-13	0.00	98,595	15	98,588	6,323,704	64.1
13-14	0.00	98,580	23	98,568	6,225,116	63.1
14-15	0.00	98,557	34	98,540	6,126,548	62.2
15-16	0.00	98,523	45	98,500	6,028,009	61.2
16-17	0.00	98,478	55	98,450	5,929,509	60.2
17-18	0.00	98,422	65	98,390	5,831,059	59.2
18-19	0.00	98,357	76	98,319	5,732,669	58.3
19-20	0.00	98,281	88	98,237	5,634,350	57.3
20-21	0.00	98,193	101	98,142	5,536,113	56.4
21-22	0.00	98,092	114	98,035	5,437,971	55.4
22-23	0.00	97,977	125	97,915	5,339,936	54.5
23-24	0.00	97,853	130	97,788	5,242,021	53.6
24-25	0.00	97,723	132	97,657	5,144,233	52.6
25-26	0.00	97,591	132	97,525	5,046,576	51.7
26-27	0.00	97,459	133	97,392	4,949,051	50.8
27-28	0.00	97,326	135	97,258	4,851,659	49.8
28-29	0.00	97,190	139	97,121	4,754,401	48.9
29-30	0.00	97,052	143	96,980	4,657,279	48.0
30-31	0.00	96,909	148	96,835	4,560,299	47.1
31-32	0.00	96,761	153	96,684	4,463,465	46.1
32-33	0.00	96,608	158	96,528	4,366,781	45.2
33-34	0.00	96,449	164	96,367	4,270,252	44.3
34-35	0.00	96,285	171	96,199	4,173,885	43.3
35-36	0.00	96,114	179	96,024	4,077,686	42.4
36-37	0.00	95,935	189	95,840	3,981,661	41.5
37-38	0.00	95,746	199	95,646	3,885,821	40.6
38-39	0.00	95,547	209	95,442	3,790,175	39.7
39-40	0.00	95,337	221	95,227	3,694,733	38.8
40-41	0.00	95,116	234	94,999	3,599,506	37.8
41-42	0.00	94,882	250	94,757	3,504,507	36.9
42-43	0.00	94,632	270	94,497	3,409,750	36.0
43-44	0.00	94,362	295	94,214	3,315,253	35.1
44-45	0.00	94,067	324	93,905	3,221,039	34.2
45-46	0.00	93,743	353	93,566	3,127,134	33.4
46-47	0.00	93,389	384	93,197	3,033,568	32.5
47-48	0.00	93,005	419	92,796	2,940,371	31.6
48-49	0.00	92,586	461	92,356	2,847,575	30.8
49-50	0.01	92,125	508	91,871	2,755,219	29.9
50-51	0.01	91,617	558	91,338	2,663,348	29.1
51-52	0.01	91,060	607	90,756	2,572,010	28.2
52-53	0.01	90,453	658	90,123	2,481,254	27.4
53-54	0.01	89,794	713	89,438	2,391,130	26.6
54-55	0.01	89,082	770	88,697	2,301,693	25.8
55-56	0.01	88,312	833	87,895	2,212,996	25.1
56-57	0.01	87,479	899	87,029	2,125,101	24.3
57-58	0.01	86,580	962	86,099	2,038,071	23.5
58-59	0.01	85,618	1,018	85,109	1,951,972	22.8
59-60	0.01	84,600	1,068	84,066	1,866,863	22.1
60-61	0.01	83,532	1,119	82,972	1,782,797	21.3
61-62	0.01	82,413	1,174	81,825	1,699,825	20.6

Table 7. Life table for the black population: United States, 2010—Con.

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.....	0.02	81,238	1,231	80,623	1,617,999	19.9
63-64.....	0.02	80,007	1,292	79,361	1,537,377	19.2
64-65.....	0.02	78,715	1,359	78,035	1,458,016	18.5
65-66.....	0.02	77,356	1,432	76,640	1,379,981	17.8
66-67.....	0.02	75,924	1,514	75,167	1,303,341	17.2
67-68.....	0.02	74,410	1,597	73,611	1,228,175	16.5
68-69.....	0.02	72,813	1,679	71,974	1,154,563	15.9
69-70.....	0.02	71,134	1,758	70,255	1,082,590	15.2
70-71.....	0.03	69,376	1,835	68,459	1,012,335	14.6
71-72.....	0.03	67,541	1,909	66,587	943,876	14.0
72-73.....	0.03	65,632	1,996	64,634	877,289	13.4
73-74.....	0.03	63,636	2,093	62,589	812,655	12.8
74-75.....	0.04	61,543	2,177	60,454	750,066	12.2
75-76.....	0.04	59,366	2,270	58,231	689,612	11.6
76-77.....	0.04	57,095	2,368	55,912	631,381	11.1
77-78.....	0.04	54,728	2,456	53,500	575,469	10.5
78-79.....	0.05	52,272	2,536	51,004	521,969	10.0
79-80.....	0.05	49,736	2,633	48,420	470,965	9.5
80-81.....	0.06	47,103	2,749	45,729	422,546	9.0
81-82.....	0.06	44,354	2,804	42,952	376,817	8.5
82-83.....	0.07	41,550	2,833	40,134	333,864	8.0
83-84.....	0.07	38,717	2,883	37,275	293,731	7.6
84-85.....	0.08	35,834	2,944	34,362	256,456	7.2
85-86.....	0.09	32,890	2,946	31,417	222,094	6.8
86-87.....	0.10	29,944	2,921	28,483	190,677	6.4
87-88.....	0.11	27,023	2,867	25,589	162,194	6.0
88-89.....	0.12	24,156	2,783	22,764	136,605	5.7
89-90.....	0.12	21,373	2,671	20,037	113,840	5.3
90-91.....	0.14	18,701	2,531	17,436	93,803	5.0
91-92.....	0.15	16,170	2,367	14,987	76,368	4.7
92-93.....	0.16	13,803	2,181	12,713	61,381	4.4
93-94.....	0.17	11,622	1,979	10,633	48,669	4.2
94-95.....	0.18	9,643	1,766	8,760	38,036	3.9
95-96.....	0.20	7,877	1,549	7,103	29,275	3.7
96-97.....	0.21	6,329	1,333	5,662	22,172	3.5
97-98.....	0.23	4,996	1,125	4,434	16,510	3.3
98-99.....	0.24	3,871	930	3,407	12,076	3.1
99-100.....	0.26	2,942	752	2,566	8,669	2.9
100 and over.....	1.00	2,190	2,190	6,104	6,104	2.8

Table 8. Life table for black males: United States, 2010

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	0.01	100,000	1,266	98,904	7,184,652	71.8
1-2	0.00	98,734	67	98,701	7,085,748	71.8
2-3	0.00	98,668	49	98,643	6,987,047	70.8
3-4	0.00	98,619	31	98,603	6,888,404	69.8
4-5	0.00	98,588	25	98,575	6,789,800	68.9
5-6	0.00	98,563	22	98,552	6,691,225	67.9
6-7	0.00	98,541	20	98,531	6,592,673	66.9
7-8	0.00	98,521	17	98,513	6,494,142	65.9
8-9	0.00	98,504	14	98,497	6,395,629	64.9
9-10	0.00	98,490	10	98,485	6,297,132	63.9
10-11	0.00	98,480	7	98,476	6,198,647	62.9
11-12	0.00	98,472	8	98,468	6,100,171	61.9
12-13	0.00	98,464	15	98,457	6,001,702	61.0
13-14	0.00	98,449	29	98,435	5,903,246	60.0
14-15	0.00	98,420	48	98,397	5,804,811	59.0
15-16	0.00	98,373	66	98,340	5,706,414	58.0
16-17	0.00	98,307	83	98,265	5,608,074	57.0
17-18	0.00	98,223	100	98,173	5,509,809	56.1
18-19	0.00	98,123	118	98,064	5,411,636	55.2
19-20	0.00	98,005	136	97,938	5,313,572	54.2
20-21	0.00	97,870	156	97,792	5,215,634	53.3
21-22	0.00	97,714	177	97,625	5,117,843	52.4
22-23	0.00	97,537	192	97,441	5,020,217	51.5
23-24	0.00	97,344	200	97,245	4,922,777	50.6
24-25	0.00	97,145	200	97,045	4,825,532	49.7
25-26	0.00	96,945	198	96,846	4,728,487	48.8
26-27	0.00	96,747	196	96,649	4,631,641	47.9
27-28	0.00	96,551	196	96,453	4,534,992	47.0
28-29	0.00	96,354	199	96,255	4,438,540	46.1
29-30	0.00	96,155	204	96,053	4,342,285	45.2
30-31	0.00	95,951	210	95,846	4,246,232	44.3
31-32	0.00	95,742	214	95,634	4,150,385	43.3
32-33	0.00	95,527	218	95,418	4,054,751	42.4
33-34	0.00	95,309	222	95,198	3,959,333	41.5
34-35	0.00	95,087	226	94,974	3,864,135	40.6
35-36	0.00	94,861	231	94,745	3,769,161	39.7
36-37	0.00	94,630	238	94,511	3,674,415	38.8
37-38	0.00	94,392	247	94,268	3,579,905	37.9
38-39	0.00	94,145	256	94,017	3,485,636	37.0
39-40	0.00	93,889	268	93,755	3,391,619	36.1
40-41	0.00	93,621	281	93,481	3,297,864	35.2
41-42	0.00	93,340	298	93,192	3,204,383	34.3
42-43	0.00	93,043	320	92,883	3,111,191	33.4
43-44	0.00	92,723	348	92,549	3,018,309	32.6
44-45	0.00	92,375	381	92,184	2,925,760	31.7
45-46	0.00	91,994	414	91,787	2,833,576	30.8
46-47	0.00	91,580	450	91,355	2,741,789	29.9
47-48	0.01	91,130	492	90,884	2,650,434	29.1
48-49	0.01	90,638	541	90,368	2,559,550	28.2
49-50	0.01	90,097	597	89,799	2,469,182	27.4
50-51	0.01	89,500	655	89,172	2,379,384	26.6
51-52	0.01	88,845	714	88,488	2,290,211	25.8
52-53	0.01	88,131	778	87,742	2,201,723	25.0
53-54	0.01	87,353	851	86,927	2,113,982	24.2
54-55	0.01	86,502	932	86,036	2,027,054	23.4
55-56	0.01	85,570	1,021	85,059	1,941,019	22.7
56-57	0.01	84,549	1,114	83,992	1,855,959	22.0
57-58	0.01	83,435	1,200	82,835	1,771,968	21.2
58-59	0.02	82,235	1,272	81,599	1,689,133	20.5
59-60	0.02	80,963	1,330	80,298	1,607,535	19.9
60-61	0.02	79,633	1,387	78,939	1,527,237	19.2
61-62	0.02	78,245	1,449	77,521	1,448,298	18.5

Table 8. Life table for black males: United States, 2010—Con.

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.....	0.02	76,796	1,511	76,041	1,370,777	17.8
63-64.....	0.02	75,285	1,574	74,498	1,294,737	17.2
64-65.....	0.02	73,712	1,640	72,891	1,220,238	16.6
65-66.....	0.02	72,071	1,712	71,215	1,147,347	15.9
66-67.....	0.03	70,359	1,792	69,463	1,076,132	15.3
67-68.....	0.03	68,566	1,873	67,630	1,006,669	14.7
68-69.....	0.03	66,693	1,954	65,716	939,040	14.1
69-70.....	0.03	64,739	2,033	63,723	873,324	13.5
70-71.....	0.03	62,706	2,104	61,654	809,601	12.9
71-72.....	0.04	60,602	2,168	59,518	747,947	12.3
72-73.....	0.04	58,434	2,247	57,310	688,429	11.8
73-74.....	0.04	56,187	2,336	55,019	631,119	11.2
74-75.....	0.04	53,851	2,415	52,643	576,100	10.7
75-76.....	0.05	51,436	2,500	50,185	523,457	10.2
76-77.....	0.05	48,935	2,590	47,640	473,271	9.7
77-78.....	0.06	46,345	2,646	45,023	425,631	9.2
78-79.....	0.06	43,700	2,681	42,359	380,608	8.7
79-80.....	0.07	41,019	2,751	39,643	338,249	8.2
80-81.....	0.07	38,267	2,820	36,857	298,606	7.8
81-82.....	0.08	35,447	2,822	34,036	261,749	7.4
82-83.....	0.09	32,625	2,843	31,204	227,713	7.0
83-84.....	0.09	29,783	2,815	28,375	196,509	6.6
84-85.....	0.10	26,968	2,762	25,587	168,134	6.2
85-86.....	0.11	24,206	2,683	22,865	142,547	5.9
86-87.....	0.12	21,524	2,579	20,234	119,682	5.6
87-88.....	0.13	18,945	2,450	17,720	99,447	5.2
88-89.....	0.14	16,495	2,300	15,345	81,727	5.0
89-90.....	0.15	14,195	2,131	13,129	66,383	4.7
90-91.....	0.16	12,064	1,946	11,091	53,253	4.4
91-92.....	0.17	10,118	1,752	9,242	42,162	4.2
92-93.....	0.19	8,366	1,552	7,591	32,920	3.9
93-94.....	0.20	6,815	1,351	6,139	25,329	3.7
94-95.....	0.21	5,463	1,156	4,885	19,190	3.5
95-96.....	0.23	4,307	971	3,821	14,305	3.3
96-97.....	0.24	3,336	800	2,936	10,484	3.1
97-98.....	0.25	2,536	645	2,213	7,548	3.0
98-99.....	0.27	1,891	509	1,636	5,334	2.8
99-100.....	0.28	1,382	393	1,185	3,698	2.7
100 and over.....	1.00	988	988	2,513	2,513	2.5

Table 9. Life table for black females: United States, 2010

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	0.01	100,000	1,047	99,075	7,799,627	78.0
1-2	0.00	98,953	59	98,923	7,700,551	77.8
2-3	0.00	98,894	34	98,877	7,601,628	76.9
3-4	0.00	98,860	22	98,849	7,502,751	75.9
4-5	0.00	98,838	18	98,829	7,403,902	74.9
5-6	0.00	98,820	16	98,812	7,305,072	73.9
6-7	0.00	98,804	14	98,797	7,206,260	72.9
7-8	0.00	98,790	12	98,784	7,107,463	71.9
8-9	0.00	98,778	11	98,773	7,008,679	71.0
9-10	0.00	98,767	11	98,762	6,909,906	70.0
10-11	0.00	98,756	12	98,750	6,811,145	69.0
11-12	0.00	98,744	13	98,737	6,712,395	68.0
12-13	0.00	98,730	15	98,723	6,613,657	67.0
13-14	0.00	98,715	18	98,706	6,514,935	66.0
14-15	0.00	98,698	20	98,687	6,416,228	65.0
15-16	0.00	98,677	23	98,666	6,317,541	64.0
16-17	0.00	98,655	26	98,642	6,218,875	63.0
17-18	0.00	98,629	29	98,615	6,120,233	62.1
18-19	0.00	98,600	34	98,583	6,021,618	61.1
19-20	0.00	98,566	39	98,547	5,923,035	60.1
20-21	0.00	98,527	45	98,505	5,824,488	59.1
21-22	0.00	98,482	52	98,456	5,725,984	58.1
22-23	0.00	98,430	58	98,401	5,627,528	57.2
23-24	0.00	98,372	62	98,341	5,529,126	56.2
24-25	0.00	98,310	66	98,277	5,430,785	55.2
25-26	0.00	98,244	69	98,210	5,332,508	54.3
26-27	0.00	98,175	74	98,138	5,234,298	53.3
27-28	0.00	98,101	78	98,062	5,136,160	52.4
28-29	0.00	98,023	82	97,982	5,038,098	51.4
29-30	0.00	97,941	87	97,898	4,940,116	50.4
30-31	0.00	97,854	91	97,809	4,842,218	49.5
31-32	0.00	97,763	96	97,715	4,744,410	48.5
32-33	0.00	97,667	103	97,615	4,646,695	47.6
33-34	0.00	97,564	111	97,508	4,549,080	46.6
34-35	0.00	97,452	121	97,392	4,451,572	45.7
35-36	0.00	97,331	132	97,265	4,354,180	44.7
36-37	0.00	97,199	144	97,127	4,256,915	43.8
37-38	0.00	97,055	156	96,977	4,159,788	42.9
38-39	0.00	96,899	167	96,815	4,062,811	41.9
39-40	0.00	96,732	179	96,642	3,965,996	41.0
40-41	0.00	96,553	191	96,458	3,869,353	40.1
41-42	0.00	96,362	206	96,259	3,772,896	39.2
42-43	0.00	96,156	224	96,044	3,676,636	38.2
43-44	0.00	95,932	247	95,809	3,580,592	37.3
44-45	0.00	95,686	272	95,550	3,484,783	36.4
45-46	0.00	95,414	297	95,265	3,389,233	35.5
46-47	0.00	95,117	323	94,955	3,293,968	34.6
47-48	0.00	94,794	352	94,618	3,199,012	33.7
48-49	0.00	94,442	387	94,249	3,104,394	32.9
49-50	0.00	94,055	426	93,842	3,010,146	32.0
50-51	0.00	93,629	467	93,396	2,916,304	31.1
51-52	0.01	93,162	508	92,908	2,822,908	30.3
52-53	0.01	92,654	547	92,381	2,730,000	29.5
53-54	0.01	92,107	585	91,815	2,637,620	28.6
54-55	0.01	91,522	621	91,212	2,545,805	27.8
55-56	0.01	90,901	661	90,571	2,454,593	27.0
56-57	0.01	90,240	703	89,889	2,364,023	26.2
57-58	0.01	89,537	746	89,164	2,274,134	25.4
58-59	0.01	88,791	789	88,396	2,184,970	24.6
59-60	0.01	88,002	831	87,586	2,096,574	23.8
60-61	0.01	87,171	876	86,733	2,008,988	23.0
61-62	0.01	86,295	924	85,833	1,922,255	22.3

Table 9. Life table for black females: United States, 2010—Con.

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.....	0.01	85,371	977	84,882	1,836,422	21.5
63-64.....	0.01	84,393	1,037	83,875	1,751,540	20.8
64-65.....	0.01	83,356	1,104	82,804	1,667,665	20.0
65-66.....	0.01	82,252	1,181	81,661	1,584,861	19.3
66-67.....	0.02	81,071	1,266	80,438	1,503,200	18.5
67-68.....	0.02	79,805	1,353	79,129	1,422,762	17.8
68-69.....	0.02	78,453	1,436	77,735	1,343,633	17.1
69-70.....	0.02	77,017	1,516	76,259	1,265,898	16.4
70-71.....	0.02	75,501	1,597	74,702	1,189,639	15.8
71-72.....	0.02	73,904	1,680	73,064	1,114,937	15.1
72-73.....	0.02	72,223	1,774	71,336	1,041,873	14.4
73-74.....	0.03	70,449	1,882	69,509	970,537	13.8
74-75.....	0.03	68,568	1,973	67,581	901,028	13.1
75-76.....	0.03	66,595	2,076	65,557	833,447	12.5
76-77.....	0.03	64,519	2,185	63,426	767,890	11.9
77-78.....	0.04	62,333	2,307	61,180	704,464	11.3
78-79.....	0.04	60,027	2,432	58,811	643,284	10.7
79-80.....	0.04	57,594	2,559	56,315	584,474	10.1
80-81.....	0.05	55,036	2,721	53,675	528,158	9.6
81-82.....	0.05	52,315	2,829	50,900	474,483	9.1
82-83.....	0.06	49,486	2,910	48,031	423,583	8.6
83-84.....	0.06	46,575	3,022	45,064	375,552	8.1
84-85.....	0.07	43,553	3,151	41,978	330,488	7.6
85-86.....	0.08	40,402	3,240	38,782	288,510	7.1
86-87.....	0.09	37,162	3,268	35,528	249,729	6.7
87-88.....	0.10	33,893	3,264	32,261	214,201	6.3
88-89.....	0.11	30,629	3,226	29,016	181,940	5.9
89-90.....	0.12	27,403	3,152	25,828	152,923	5.6
90-91.....	0.13	24,252	3,041	22,731	127,096	5.2
91-92.....	0.14	21,211	2,895	19,764	104,364	4.9
92-93.....	0.15	18,316	2,716	16,958	84,601	4.6
93-94.....	0.16	15,600	2,508	14,346	67,643	4.3
94-95.....	0.17	13,092	2,278	11,953	53,296	4.1
95-96.....	0.19	10,814	2,032	9,798	41,343	3.8
96-97.....	0.20	8,783	1,778	7,894	31,545	3.6
97-98.....	0.22	7,005	1,524	6,243	23,651	3.4
98-99.....	0.23	5,481	1,279	4,841	17,408	3.2
99-100.....	0.25	4,202	1,049	3,678	12,567	3.0
100 and over.....	1.00	3,153	3,153	8,889	8,889	2.8

Table 10. Life table for the Hispanic population: United States, 2010

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	0.01	100,000	522	99,545	8,140,343	81.4
1-2	0.00	99,478	34	99,461	8,040,799	80.8
2-3	0.00	99,444	24	99,432	7,941,337	79.9
3-4	0.00	99,420	18	99,411	7,841,905	78.9
4-5	0.00	99,402	15	99,395	7,742,494	77.9
5-6	0.00	99,388	12	99,382	7,643,099	76.9
6-7	0.00	99,376	10	99,371	7,543,717	75.9
7-8	0.00	99,366	8	99,362	7,444,346	74.9
8-9	0.00	99,358	7	99,354	7,344,984	73.9
9-10	0.00	99,350	6	99,347	7,245,630	72.9
10-11	0.00	99,344	6	99,341	7,146,283	71.9
11-12	0.00	99,338	7	99,334	7,046,942	70.9
12-13	0.00	99,331	10	99,326	6,947,608	69.9
13-14	0.00	99,321	14	99,314	6,848,282	69.0
14-15	0.00	99,307	21	99,296	6,748,969	68.0
15-16	0.00	99,286	27	99,272	6,649,672	67.0
16-17	0.00	99,258	34	99,241	6,550,400	66.0
17-18	0.00	99,224	40	99,204	6,451,159	65.0
18-19	0.00	99,184	46	99,161	6,351,955	64.0
19-20	0.00	99,138	51	99,112	6,252,794	63.1
20-21	0.00	99,087	57	99,058	6,153,681	62.1
21-22	0.00	99,030	62	98,999	6,054,623	61.1
22-23	0.00	98,968	66	98,935	5,955,624	60.2
23-24	0.00	98,901	68	98,867	5,856,690	59.2
24-25	0.00	98,833	68	98,799	5,757,822	58.3
25-26	0.00	98,765	68	98,731	5,659,023	57.3
26-27	0.00	98,697	68	98,663	5,560,292	56.3
27-28	0.00	98,629	68	98,595	5,461,629	55.4
28-29	0.00	98,561	69	98,526	5,363,034	54.4
29-30	0.00	98,492	70	98,457	5,264,508	53.5
30-31	0.00	98,422	71	98,387	5,166,051	52.5
31-32	0.00	98,352	72	98,315	5,067,664	51.5
32-33	0.00	98,279	74	98,242	4,969,348	50.6
33-34	0.00	98,205	77	98,167	4,871,106	49.6
34-35	0.00	98,128	80	98,088	4,772,939	48.6
35-36	0.00	98,048	84	98,006	4,674,851	47.7
36-37	0.00	97,964	89	97,919	4,576,845	46.7
37-38	0.00	97,874	95	97,827	4,478,926	45.8
38-39	0.00	97,779	102	97,729	4,381,099	44.8
39-40	0.00	97,678	110	97,623	4,283,371	43.9
40-41	0.00	97,568	119	97,508	4,185,748	42.9
41-42	0.00	97,449	129	97,385	4,088,239	42.0
42-43	0.00	97,320	141	97,250	3,990,855	41.0
43-44	0.00	97,180	154	97,103	3,893,604	40.1
44-45	0.00	97,026	170	96,941	3,796,502	39.1
45-46	0.00	96,856	186	96,763	3,699,561	38.2
46-47	0.00	96,670	203	96,568	3,602,798	37.3
47-48	0.00	96,467	222	96,356	3,506,229	36.3
48-49	0.00	96,245	242	96,124	3,409,873	35.4
49-50	0.00	96,003	264	95,871	3,313,750	34.5
50-51	0.00	95,739	288	95,595	3,217,879	33.6
51-52	0.00	95,451	313	95,294	3,122,285	32.7
52-53	0.00	95,137	340	94,967	3,026,991	31.8
53-54	0.00	94,797	367	94,614	2,932,023	30.9
54-55	0.00	94,431	395	94,233	2,837,409	30.0
55-56	0.00	94,036	425	93,824	2,743,176	29.2
56-57	0.00	93,611	458	93,383	2,649,352	28.3
57-58	0.01	93,154	494	92,907	2,555,970	27.4
58-59	0.01	92,660	532	92,394	2,463,063	26.6
59-60	0.01	92,128	573	91,842	2,370,669	25.7
60-61	0.01	91,556	616	91,248	2,278,827	24.9
61-62	0.01	90,940	662	90,609	2,187,579	24.1

Table 10. Life table for the Hispanic population: United States, 2010—Con.

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.....	0.01	90,277	712	89,921	2,096,970	23.2
63-64.....	0.01	89,565	766	89,182	2,007,049	22.4
64-65.....	0.01	88,799	826	88,387	1,917,867	21.6
65-66.....	0.01	87,974	893	87,527	1,829,480	20.8
66-67.....	0.01	87,081	968	86,597	1,741,953	20.0
67-68.....	0.01	86,113	1,048	85,589	1,655,356	19.2
68-69.....	0.01	85,065	1,128	84,501	1,569,767	18.5
69-70.....	0.01	83,937	1,209	83,332	1,485,266	17.7
70-71.....	0.02	82,728	1,290	82,083	1,401,934	16.9
71-72.....	0.02	81,438	1,376	80,750	1,319,851	16.2
72-73.....	0.02	80,062	1,473	79,325	1,239,101	15.5
73-74.....	0.02	78,589	1,586	77,796	1,159,775	14.8
74-75.....	0.02	77,003	1,712	76,147	1,081,980	14.1
75-76.....	0.02	75,291	1,842	74,369	1,005,833	13.4
76-77.....	0.03	73,448	1,974	72,461	931,463	12.7
77-78.....	0.03	71,474	2,121	70,414	859,002	12.0
78-79.....	0.03	69,353	2,281	68,213	788,588	11.4
79-80.....	0.04	67,072	2,448	65,848	720,376	10.7
80-81.....	0.04	64,624	2,612	63,318	654,528	10.1
81-82.....	0.04	62,012	2,787	60,618	591,210	9.5
82-83.....	0.05	59,225	2,953	57,748	530,592	9.0
83-84.....	0.06	56,272	3,113	54,715	472,844	8.4
84-85.....	0.06	53,159	3,305	51,507	418,128	7.9
85-86.....	0.07	49,854	3,484	48,112	366,622	7.4
86-87.....	0.08	46,370	3,627	44,557	318,509	6.9
87-88.....	0.09	42,743	3,736	40,875	273,953	6.4
88-89.....	0.10	39,007	3,802	37,106	233,078	6.0
89-90.....	0.11	35,205	3,818	33,296	195,971	5.6
90-91.....	0.12	31,387	3,779	29,497	162,676	5.2
91-92.....	0.13	27,608	3,681	25,767	133,178	4.8
92-93.....	0.15	23,927	3,522	22,166	107,411	4.5
93-94.....	0.16	20,405	3,307	18,751	85,245	4.2
94-95.....	0.18	17,097	3,041	15,577	66,494	3.9
95-96.....	0.19	14,056	2,735	12,689	50,917	3.6
96-97.....	0.21	11,321	2,401	10,121	38,228	3.4
97-98.....	0.23	8,920	2,055	7,893	28,108	3.2
98-99.....	0.25	6,866	1,711	6,010	20,215	2.9
99-100.....	0.27	5,155	1,384	4,463	14,205	2.8
100 and over.....	1.00	3,770	3,770	9,742	9,742	2.6

Table 11. Life table for Hispanic males: United States, 2010

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	0.01	100,000	568	99,503	7,871,743	78.7
1-2	0.00	99,432	34	99,415	7,772,240	78.2
2-3	0.00	99,398	28	99,384	7,672,826	77.2
3-4	0.00	99,370	21	99,360	7,573,442	76.2
4-5	0.00	99,349	18	99,340	7,474,082	75.2
5-6	0.00	99,331	14	99,324	7,374,742	74.2
6-7	0.00	99,317	12	99,312	7,275,417	73.3
7-8	0.00	99,306	10	99,301	7,176,106	72.3
8-9	0.00	99,296	8	99,292	7,076,805	71.3
9-10	0.00	99,288	6	99,285	6,977,513	70.3
10-11	0.00	99,282	5	99,279	6,878,229	69.3
11-12	0.00	99,277	5	99,274	6,778,949	68.3
12-13	0.00	99,271	9	99,267	6,679,675	67.3
13-14	0.00	99,262	17	99,254	6,580,409	66.3
14-15	0.00	99,245	28	99,231	6,481,155	65.3
15-16	0.00	99,218	39	99,198	6,381,923	64.3
16-17	0.00	99,178	50	99,153	6,282,726	63.3
17-18	0.00	99,128	61	99,097	6,183,573	62.4
18-19	0.00	99,067	69	99,033	6,084,475	61.4
19-20	0.00	98,998	77	98,960	5,985,443	60.5
20-21	0.00	98,921	84	98,879	5,886,483	59.5
21-22	0.00	98,837	91	98,792	5,787,604	58.6
22-23	0.00	98,746	97	98,697	5,688,812	57.6
23-24	0.00	98,649	99	98,599	5,590,115	56.7
24-25	0.00	98,550	100	98,500	5,491,515	55.7
25-26	0.00	98,449	100	98,399	5,393,016	54.8
26-27	0.00	98,349	100	98,299	5,294,616	53.8
27-28	0.00	98,249	100	98,199	5,196,317	52.9
28-29	0.00	98,149	101	98,098	5,098,118	51.9
29-30	0.00	98,048	102	97,996	5,000,020	51.0
30-31	0.00	97,945	104	97,893	4,902,023	50.0
31-32	0.00	97,841	105	97,789	4,804,130	49.1
32-33	0.00	97,736	107	97,682	4,706,341	48.2
33-34	0.00	97,628	110	97,574	4,608,659	47.2
34-35	0.00	97,519	113	97,462	4,511,086	46.3
35-36	0.00	97,406	116	97,348	4,413,624	45.3
36-37	0.00	97,289	121	97,229	4,316,276	44.4
37-38	0.00	97,168	127	97,105	4,219,047	43.4
38-39	0.00	97,042	135	96,974	4,121,942	42.5
39-40	0.00	96,907	144	96,835	4,024,968	41.5
40-41	0.00	96,762	155	96,685	3,928,133	40.6
41-42	0.00	96,607	167	96,524	3,831,448	39.7
42-43	0.00	96,440	181	96,350	3,734,925	38.7
43-44	0.00	96,260	196	96,162	3,638,575	37.8
44-45	0.00	96,064	213	95,957	3,542,413	36.9
45-46	0.00	95,851	231	95,735	3,446,456	36.0
46-47	0.00	95,620	251	95,494	3,350,721	35.0
47-48	0.00	95,369	273	95,232	3,255,226	34.1
48-49	0.00	95,096	296	94,948	3,159,994	33.2
49-50	0.00	94,800	323	94,638	3,065,046	32.3
50-51	0.00	94,477	351	94,301	2,970,408	31.4
51-52	0.00	94,126	382	93,935	2,876,106	30.6
52-53	0.00	93,744	417	93,536	2,782,171	29.7
53-54	0.00	93,327	455	93,100	2,688,636	28.8
54-55	0.01	92,872	498	92,623	2,595,536	27.9
55-56	0.01	92,374	547	92,100	2,502,913	27.1
56-57	0.01	91,827	599	91,527	2,410,813	26.3
57-58	0.01	91,228	651	90,903	2,319,286	25.4
58-59	0.01	90,577	699	90,228	2,228,383	24.6
59-60	0.01	89,879	743	89,507	2,138,155	23.8
60-61	0.01	89,135	788	88,741	2,048,648	23.0
61-62	0.01	88,347	838	87,928	1,959,907	22.2

Table 11. Life table for Hispanic males: United States, 2010—Con.

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.....	0.01	87,510	891	87,064	1,871,979	21.4
63-64.....	0.01	86,619	950	86,144	1,784,914	20.6
64-65.....	0.01	85,669	1,019	85,159	1,698,770	19.8
65-66.....	0.01	84,650	1,095	84,102	1,613,611	19.1
66-67.....	0.01	83,554	1,179	82,965	1,529,509	18.3
67-68.....	0.02	82,375	1,271	81,740	1,446,544	17.6
68-69.....	0.02	81,104	1,366	80,421	1,364,805	16.8
69-70.....	0.02	79,738	1,462	79,007	1,284,383	16.1
70-71.....	0.02	78,276	1,558	77,497	1,205,377	15.4
71-72.....	0.02	76,718	1,657	75,890	1,127,880	14.7
72-73.....	0.02	75,061	1,761	74,180	1,051,990	14.0
73-74.....	0.03	73,300	1,875	72,362	977,809	13.3
74-75.....	0.03	71,424	1,999	70,425	905,447	12.7
75-76.....	0.03	69,425	2,121	68,365	835,023	12.0
76-77.....	0.03	67,304	2,242	66,183	766,658	11.4
77-78.....	0.04	65,062	2,380	63,872	700,475	10.8
78-79.....	0.04	62,682	2,535	61,414	636,603	10.2
79-80.....	0.04	60,147	2,701	58,796	575,188	9.6
80-81.....	0.05	57,446	2,869	56,012	516,392	9.0
81-82.....	0.06	54,577	3,050	53,052	460,380	8.4
82-83.....	0.06	51,527	3,189	49,932	407,329	7.9
83-84.....	0.07	48,338	3,296	46,690	357,396	7.4
84-85.....	0.08	45,042	3,492	43,295	310,707	6.9
85-86.....	0.09	41,549	3,601	39,749	267,412	6.4
86-87.....	0.10	37,948	3,669	36,113	227,663	6.0
87-88.....	0.11	34,279	3,690	32,434	191,550	5.6
88-89.....	0.12	30,589	3,657	28,760	159,116	5.2
89-90.....	0.13	26,932	3,567	25,148	130,356	4.8
90-91.....	0.15	23,365	3,419	21,655	105,208	4.5
91-92.....	0.16	19,945	3,215	18,338	83,553	4.2
92-93.....	0.18	16,730	2,962	15,249	65,215	3.9
93-94.....	0.19	13,768	2,668	12,434	49,966	3.6
94-95.....	0.21	11,100	2,346	9,927	37,532	3.4
95-96.....	0.23	8,754	2,011	7,748	27,605	3.2
96-97.....	0.25	6,743	1,677	5,904	19,856	2.9
97-98.....	0.27	5,066	1,359	4,386	13,952	2.8
98-99.....	0.29	3,707	1,068	3,173	9,566	2.6
99-100.....	0.31	2,639	813	2,232	6,393	2.4
100 and over.....	1.00	1,825	1,825	4,161	4,161	2.3

Table 12. Life table for Hispanic females: United States, 2010

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	0.00	100,000	473	99,588	8,382,303	83.8
1-2	0.00	99,527	35	99,510	8,282,715	83.2
2-3	0.00	99,492	19	99,482	8,183,206	82.2
3-4	0.00	99,473	15	99,465	8,083,724	81.3
4-5	0.00	99,457	11	99,452	7,984,259	80.3
5-6	0.00	99,446	10	99,442	7,884,807	79.3
6-7	0.00	99,437	8	99,433	7,785,365	78.3
7-8	0.00	99,429	7	99,425	7,685,932	77.3
8-9	0.00	99,422	7	99,419	7,586,507	76.3
9-10	0.00	99,416	7	99,412	7,487,088	75.3
10-11	0.00	99,409	8	99,405	7,387,676	74.3
11-12	0.00	99,401	9	99,397	7,288,271	73.3
12-13	0.00	99,392	10	99,387	7,188,875	72.3
13-14	0.00	99,382	12	99,376	7,089,488	71.3
14-15	0.00	99,370	13	99,364	6,990,111	70.3
15-16	0.00	99,357	15	99,350	6,890,748	69.4
16-17	0.00	99,342	17	99,334	6,791,398	68.4
17-18	0.00	99,325	19	99,316	6,692,064	67.4
18-19	0.00	99,307	21	99,296	6,592,748	66.4
19-20	0.00	99,286	23	99,274	6,493,452	65.4
20-21	0.00	99,262	26	99,249	6,394,178	64.4
21-22	0.00	99,236	29	99,222	6,294,929	63.4
22-23	0.00	99,207	31	99,192	6,195,707	62.5
23-24	0.00	99,176	32	99,160	6,096,515	61.5
24-25	0.00	99,144	32	99,128	5,997,355	60.5
25-26	0.00	99,112	32	99,096	5,898,227	59.5
26-27	0.00	99,080	32	99,064	5,799,131	58.5
27-28	0.00	99,048	33	99,031	5,700,068	57.5
28-29	0.00	99,015	33	98,999	5,601,036	56.6
29-30	0.00	98,982	34	98,965	5,502,037	55.6
30-31	0.00	98,949	35	98,931	5,403,072	54.6
31-32	0.00	98,914	36	98,896	5,304,141	53.6
32-33	0.00	98,878	38	98,859	5,205,245	52.6
33-34	0.00	98,841	41	98,820	5,106,385	51.7
34-35	0.00	98,800	45	98,777	5,007,565	50.7
35-36	0.00	98,754	50	98,729	4,908,788	49.7
36-37	0.00	98,704	56	98,676	4,810,059	48.7
37-38	0.00	98,648	61	98,617	4,711,383	47.8
38-39	0.00	98,587	67	98,553	4,612,766	46.8
39-40	0.00	98,520	73	98,483	4,514,212	45.8
40-41	0.00	98,447	80	98,407	4,415,729	44.9
41-42	0.00	98,367	87	98,323	4,317,322	43.9
42-43	0.00	98,280	97	98,231	4,218,999	42.9
43-44	0.00	98,183	109	98,128	4,120,768	42.0
44-45	0.00	98,073	124	98,011	4,022,640	41.0
45-46	0.00	97,949	139	97,880	3,924,628	40.1
46-47	0.00	97,811	154	97,734	3,826,748	39.1
47-48	0.00	97,656	170	97,571	3,729,015	38.2
48-49	0.00	97,486	187	97,393	3,631,443	37.3
49-50	0.00	97,299	205	97,196	3,534,051	36.3
50-51	0.00	97,094	225	96,981	3,436,854	35.4
51-52	0.00	96,869	246	96,746	3,339,873	34.5
52-53	0.00	96,623	265	96,491	3,243,127	33.6
53-54	0.00	96,359	280	96,219	3,146,636	32.7
54-55	0.00	96,079	293	95,933	3,050,417	31.7
55-56	0.00	95,787	305	95,634	2,954,484	30.8
56-57	0.00	95,482	320	95,322	2,858,850	29.9
57-58	0.00	95,162	341	94,991	2,763,528	29.0
58-59	0.00	94,820	372	94,634	2,668,537	28.1
59-60	0.00	94,449	409	94,244	2,573,903	27.3
60-61	0.00	94,039	452	93,813	2,479,659	26.4
61-62	0.01	93,587	497	93,339	2,385,846	25.5

Table 12. Life table for Hispanic females: United States, 2010—Con.

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.....	0.01	93,090	545	92,818	2,292,508	24.6
63-64.....	0.01	92,546	594	92,248	2,199,690	23.8
64-65.....	0.01	91,951	648	91,627	2,107,441	22.9
65-66.....	0.01	91,303	710	90,948	2,015,814	22.1
66-67.....	0.01	90,594	779	90,204	1,924,866	21.2
67-68.....	0.01	89,814	851	89,389	1,834,662	20.4
68-69.....	0.01	88,963	921	88,503	1,745,273	19.6
69-70.....	0.01	88,042	989	87,547	1,656,771	18.8
70-71.....	0.01	87,053	1,058	86,524	1,569,223	18.0
71-72.....	0.01	85,995	1,135	85,427	1,482,699	17.2
72-73.....	0.01	84,859	1,227	84,246	1,397,272	16.5
73-74.....	0.02	83,632	1,340	82,962	1,313,027	15.7
74-75.....	0.02	82,292	1,472	81,556	1,230,065	14.9
75-76.....	0.02	80,820	1,612	80,014	1,148,509	14.2
76-77.....	0.02	79,208	1,755	78,330	1,068,495	13.5
77-78.....	0.02	77,452	1,912	76,496	990,165	12.8
78-79.....	0.03	75,540	2,084	74,498	913,669	12.1
79-80.....	0.03	73,456	2,260	72,326	839,171	11.4
80-81.....	0.03	71,197	2,429	69,982	766,844	10.8
81-82.....	0.04	68,768	2,611	67,462	696,862	10.1
82-83.....	0.04	66,157	2,810	64,752	629,400	9.5
83-84.....	0.05	63,347	3,025	61,835	564,648	8.9
84-85.....	0.05	60,323	3,269	58,688	502,813	8.3
85-86.....	0.06	57,054	3,486	55,311	444,125	7.8
86-87.....	0.07	53,568	3,697	51,719	388,814	7.3
87-88.....	0.08	49,871	3,880	47,931	337,094	6.8
88-89.....	0.09	45,991	4,026	43,978	289,164	6.3
89-90.....	0.10	41,965	4,124	39,903	245,186	5.8
90-91.....	0.11	37,841	4,164	35,759	205,283	5.4
91-92.....	0.12	33,677	4,139	31,607	169,524	5.0
92-93.....	0.14	29,538	4,042	27,517	137,917	4.7
93-94.....	0.15	25,496	3,873	23,559	110,400	4.3
94-95.....	0.17	21,623	3,634	19,806	86,840	4.0
95-96.....	0.19	17,989	3,332	16,323	67,034	3.7
96-97.....	0.20	14,657	2,981	13,166	50,712	3.5
97-98.....	0.22	11,675	2,597	10,377	37,546	3.2
98-99.....	0.24	9,078	2,199	7,979	27,169	3.0
99-100.....	0.26	6,879	1,807	5,976	19,190	2.8
100 and over.....	1.00	5,072	5,072	13,215	13,215	2.6

Table 13. Life table for the non-Hispanic white population: United States, 2010

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	0.01	100,000	516	99,549	7,878,950	78.8
1-2	0.00	99,484	39	99,464	7,779,400	78.2
2-3	0.00	99,445	25	99,432	7,679,936	77.2
3-4	0.00	99,420	20	99,410	7,580,504	76.2
4-5	0.00	99,399	14	99,392	7,481,094	75.3
5-6	0.00	99,385	14	99,379	7,381,701	74.3
6-7	0.00	99,372	13	99,365	7,282,323	73.3
7-8	0.00	99,359	11	99,353	7,182,958	72.3
8-9	0.00	99,348	10	99,343	7,083,604	71.3
9-10	0.00	99,338	9	99,333	6,984,261	70.3
10-11	0.00	99,329	8	99,325	6,884,928	69.3
11-12	0.00	99,321	8	99,317	6,785,603	68.3
12-13	0.00	99,313	11	99,307	6,686,286	67.3
13-14	0.00	99,302	17	99,294	6,586,978	66.3
14-15	0.00	99,285	24	99,274	6,487,684	65.3
15-16	0.00	99,262	31	99,246	6,388,411	64.4
16-17	0.00	99,230	39	99,211	6,289,165	63.4
17-18	0.00	99,191	47	99,168	6,189,954	62.4
18-19	0.00	99,144	55	99,117	6,090,786	61.4
19-20	0.00	99,090	63	99,058	5,991,669	60.5
20-21	0.00	99,026	72	98,990	5,892,612	59.5
21-22	0.00	98,954	81	98,914	5,793,621	58.5
22-23	0.00	98,873	87	98,830	5,694,708	57.6
23-24	0.00	98,786	91	98,740	5,595,878	56.6
24-25	0.00	98,695	92	98,649	5,497,138	55.7
25-26	0.00	98,603	93	98,556	5,398,489	54.7
26-27	0.00	98,510	94	98,463	5,299,933	53.8
27-28	0.00	98,416	96	98,368	5,201,470	52.9
28-29	0.00	98,320	98	98,271	5,103,102	51.9
29-30	0.00	98,222	100	98,172	5,004,831	51.0
30-31	0.00	98,122	104	98,070	4,906,660	50.0
31-32	0.00	98,018	107	97,965	4,808,590	49.1
32-33	0.00	97,911	111	97,856	4,710,625	48.1
33-34	0.00	97,800	115	97,743	4,612,769	47.2
34-35	0.00	97,686	119	97,626	4,515,026	46.2
35-36	0.00	97,567	124	97,505	4,417,400	45.3
36-37	0.00	97,443	131	97,378	4,319,895	44.3
37-38	0.00	97,312	138	97,243	4,222,517	43.4
38-39	0.00	97,174	145	97,102	4,125,273	42.5
39-40	0.00	97,029	154	96,952	4,028,172	41.5
40-41	0.00	96,875	163	96,793	3,931,220	40.6
41-42	0.00	96,712	175	96,624	3,834,426	39.6
42-43	0.00	96,537	191	96,442	3,737,802	38.7
43-44	0.00	96,346	212	96,240	3,641,360	37.8
44-45	0.00	96,135	235	96,017	3,545,120	36.9
45-46	0.00	95,900	259	95,770	3,449,103	36.0
46-47	0.00	95,641	282	95,500	3,353,333	35.1
47-48	0.00	95,358	307	95,205	3,257,833	34.2
48-49	0.00	95,052	333	94,886	3,162,628	33.3
49-50	0.00	94,719	360	94,539	3,067,742	32.4
50-51	0.00	94,359	390	94,164	2,973,203	31.5
51-52	0.00	93,969	420	93,759	2,879,040	30.6
52-53	0.00	93,549	450	93,324	2,785,280	29.8
53-54	0.01	93,100	480	92,860	2,691,956	28.9
54-55	0.01	92,620	511	92,364	2,599,096	28.1
55-56	0.01	92,108	545	91,836	2,506,732	27.2
56-57	0.01	91,564	581	91,273	2,414,896	26.4
57-58	0.01	90,983	621	90,672	2,323,623	25.5
58-59	0.01	90,362	663	90,030	2,232,951	24.7
59-60	0.01	89,698	708	89,344	2,142,921	23.9
60-61	0.01	88,990	755	88,613	2,053,576	23.1
61-62	0.01	88,235	804	87,834	1,964,963	22.3

Table 13. Life table for the non-Hispanic white population: United States, 2010—Con.

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.....	0.01	87,432	857	87,004	1,877,130	21.5
63-64.....	0.01	86,575	917	86,117	1,790,126	20.7
64-65.....	0.01	85,659	986	85,166	1,704,009	19.9
65-66.....	0.01	84,673	1,066	84,140	1,618,843	19.1
66-67.....	0.01	83,607	1,156	83,028	1,534,704	18.4
67-68.....	0.02	82,450	1,247	81,827	1,451,675	17.6
68-69.....	0.02	81,203	1,335	80,536	1,369,849	16.9
69-70.....	0.02	79,869	1,424	79,157	1,289,313	16.1
70-71.....	0.02	78,445	1,520	77,684	1,210,156	15.4
71-72.....	0.02	76,924	1,627	76,111	1,132,472	14.7
72-73.....	0.02	75,297	1,744	74,425	1,056,361	14.0
73-74.....	0.03	73,552	1,871	72,617	981,937	13.4
74-75.....	0.03	71,681	2,008	70,677	909,320	12.7
75-76.....	0.03	69,673	2,146	68,600	838,643	12.0
76-77.....	0.03	67,527	2,281	66,386	770,044	11.4
77-78.....	0.04	65,246	2,433	64,029	703,657	10.8
78-79.....	0.04	62,813	2,591	61,517	639,628	10.2
79-80.....	0.05	60,222	2,745	58,849	578,111	9.6
80-81.....	0.05	57,477	2,890	56,032	519,261	9.0
81-82.....	0.06	54,587	3,038	53,068	463,230	8.5
82-83.....	0.06	51,548	3,174	49,961	410,162	8.0
83-84.....	0.07	48,374	3,296	46,726	360,201	7.4
84-85.....	0.08	45,078	3,441	43,358	313,475	7.0
85-86.....	0.09	41,638	3,560	39,858	270,117	6.5
86-87.....	0.10	38,078	3,631	36,262	230,259	6.0
87-88.....	0.11	34,447	3,657	32,618	193,997	5.6
88-89.....	0.12	30,790	3,631	28,974	161,378	5.2
89-90.....	0.13	27,158	3,550	25,383	132,404	4.9
90-91.....	0.14	23,608	3,412	21,903	107,021	4.5
91-92.....	0.16	20,197	3,218	18,588	85,118	4.2
92-93.....	0.18	16,979	2,974	15,492	66,530	3.9
93-94.....	0.19	14,005	2,688	12,661	51,038	3.6
94-95.....	0.21	11,317	2,373	10,130	38,377	3.4
95-96.....	0.23	8,944	2,042	7,923	28,246	3.2
96-97.....	0.25	6,903	1,709	6,048	20,323	2.9
97-98.....	0.27	5,194	1,390	4,499	14,275	2.7
98-99.....	0.29	3,804	1,096	3,256	9,776	2.6
99-100.....	0.31	2,708	836	2,290	6,520	2.4
100 and over.....	1.00	1,872	1,872	4,230	4,230	2.3

Table 14. Life table for non-Hispanic white males: United States, 2010

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	0.01	100,000	560	99,512	7,641,155	76.4
1-2	0.00	99,440	40	99,420	7,541,644	75.8
2-3	0.00	99,400	29	99,385	7,442,224	74.9
3-4	0.00	99,371	24	99,359	7,342,839	73.9
4-5	0.00	99,347	15	99,339	7,243,480	72.9
5-6	0.00	99,331	16	99,323	7,144,141	71.9
6-7	0.00	99,315	14	99,308	7,044,818	70.9
7-8	0.00	99,301	12	99,295	6,945,510	69.9
8-9	0.00	99,289	11	99,284	6,846,215	69.0
9-10	0.00	99,278	9	99,274	6,746,931	68.0
10-11	0.00	99,270	8	99,266	6,647,657	67.0
11-12	0.00	99,262	8	99,258	6,548,391	66.0
12-13	0.00	99,254	12	99,248	6,449,133	65.0
13-14	0.00	99,242	20	99,232	6,349,885	64.0
14-15	0.00	99,222	30	99,207	6,250,653	63.0
15-16	0.00	99,192	41	99,172	6,151,446	62.0
16-17	0.00	99,151	51	99,126	6,052,275	61.0
17-18	0.00	99,101	62	99,070	5,953,149	60.1
18-19	0.00	99,038	75	99,001	5,854,079	59.1
19-20	0.00	98,963	88	98,919	5,755,078	58.2
20-21	0.00	98,875	103	98,823	5,656,159	57.2
21-22	0.00	98,772	117	98,714	5,557,335	56.3
22-23	0.00	98,655	127	98,592	5,458,622	55.3
23-24	0.00	98,529	131	98,463	5,360,030	54.4
24-25	0.00	98,397	132	98,331	5,261,567	53.5
25-26	0.00	98,265	132	98,199	5,163,236	52.5
26-27	0.00	98,133	132	98,067	5,065,037	51.6
27-28	0.00	98,002	132	97,935	4,966,969	50.7
28-29	0.00	97,869	134	97,802	4,869,034	49.8
29-30	0.00	97,736	136	97,668	4,771,231	48.8
30-31	0.00	97,600	138	97,531	4,673,564	47.9
31-32	0.00	97,462	141	97,391	4,576,033	47.0
32-33	0.00	97,321	144	97,249	4,478,641	46.0
33-34	0.00	97,177	147	97,104	4,381,392	45.1
34-35	0.00	97,030	151	96,955	4,284,289	44.2
35-36	0.00	96,879	156	96,801	4,187,334	43.2
36-37	0.00	96,723	163	96,641	4,090,533	42.3
37-38	0.00	96,560	171	96,474	3,993,892	41.4
38-39	0.00	96,388	179	96,299	3,897,418	40.4
39-40	0.00	96,209	189	96,115	3,801,119	39.5
40-41	0.00	96,020	199	95,921	3,705,005	38.6
41-42	0.00	95,821	213	95,715	3,609,084	37.7
42-43	0.00	95,608	232	95,492	3,513,369	36.7
43-44	0.00	95,376	258	95,248	3,417,877	35.8
44-45	0.00	95,119	287	94,975	3,322,630	34.9
45-46	0.00	94,832	317	94,673	3,227,655	34.0
46-47	0.00	94,514	347	94,341	3,132,982	33.1
47-48	0.00	94,168	377	93,979	3,038,641	32.3
48-49	0.00	93,790	409	93,586	2,944,662	31.4
49-50	0.00	93,381	443	93,160	2,851,076	30.5
50-51	0.01	92,938	478	92,699	2,757,916	29.7
51-52	0.01	92,460	514	92,203	2,665,217	28.8
52-53	0.01	91,946	551	91,670	2,573,014	28.0
53-54	0.01	91,395	591	91,099	2,481,344	27.1
54-55	0.01	90,804	633	90,487	2,390,244	26.3
55-56	0.01	90,171	678	89,832	2,299,757	25.5
56-57	0.01	89,493	726	89,130	2,209,925	24.7
57-58	0.01	88,768	774	88,381	2,120,794	23.9
58-59	0.01	87,994	822	87,583	2,032,413	23.1
59-60	0.01	87,172	869	86,737	1,944,831	22.3
60-61	0.01	86,303	916	85,845	1,858,094	21.5
61-62	0.01	85,387	966	84,904	1,772,249	20.8

Table 14. Life table for non-Hispanic white males: United States, 2010—Con.

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.....	0.01	84,421	1,021	83,911	1,687,345	20.0
63-64.....	0.01	83,400	1,085	82,857	1,603,434	19.2
64-65.....	0.01	82,315	1,161	81,734	1,520,577	18.5
65-66.....	0.02	81,154	1,249	80,530	1,438,842	17.7
66-67.....	0.02	79,906	1,346	79,233	1,358,313	17.0
67-68.....	0.02	78,560	1,443	77,838	1,279,080	16.3
68-69.....	0.02	77,117	1,536	76,349	1,201,242	15.6
69-70.....	0.02	75,581	1,630	74,765	1,124,893	14.9
70-71.....	0.02	73,950	1,729	73,086	1,050,128	14.2
71-72.....	0.03	72,221	1,835	71,304	977,042	13.5
72-73.....	0.03	70,386	1,955	69,408	905,738	12.9
73-74.....	0.03	68,430	2,085	67,388	836,330	12.2
74-75.....	0.03	66,345	2,227	65,232	768,942	11.6
75-76.....	0.04	64,118	2,361	62,938	703,711	11.0
76-77.....	0.04	61,757	2,487	60,514	640,773	10.4
77-78.....	0.04	59,270	2,634	57,953	580,259	9.8
78-79.....	0.05	56,636	2,779	55,246	522,306	9.2
79-80.....	0.05	53,857	2,922	52,396	467,060	8.7
80-81.....	0.06	50,935	3,057	49,406	414,664	8.1
81-82.....	0.07	47,878	3,190	46,283	365,257	7.6
82-83.....	0.07	44,688	3,288	43,044	318,974	7.1
83-84.....	0.08	41,400	3,347	39,726	275,930	6.7
84-85.....	0.09	38,053	3,486	36,310	236,204	6.2
85-86.....	0.10	34,567	3,528	32,803	199,894	5.8
86-87.....	0.11	31,039	3,522	29,278	167,091	5.4
87-88.....	0.13	27,517	3,463	25,785	137,813	5.0
88-89.....	0.14	24,054	3,350	22,379	112,028	4.7
89-90.....	0.15	20,704	3,182	19,112	89,649	4.3
90-91.....	0.17	17,521	2,964	16,039	70,537	4.0
91-92.....	0.19	14,557	2,702	13,206	54,497	3.7
92-93.....	0.20	11,856	2,407	10,652	41,291	3.5
93-94.....	0.22	9,449	2,091	8,404	30,639	3.2
94-95.....	0.24	7,358	1,768	6,474	22,235	3.0
95-96.....	0.26	5,590	1,454	4,863	15,761	2.8
96-97.....	0.28	4,136	1,160	3,556	10,898	2.6
97-98.....	0.30	2,977	896	2,529	7,341	2.5
98-99.....	0.32	2,080	670	1,745	4,813	2.3
99-100.....	0.34	1,411	484	1,169	3,067	2.2
100 and over.....	1.00	927	927	1,899	1,899	2.0

Table 15. Life table for non-Hispanic white females: United States, 2010

	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	0.00	100,000	470	99,590	8,110,864	81.1
1-2	0.00	99,530	38	99,511	8,011,274	80.5
2-3	0.00	99,492	20	99,482	7,911,763	79.5
3-4	0.00	99,472	17	99,464	7,812,282	78.5
4-5	0.00	99,455	13	99,449	7,712,818	77.6
5-6	0.00	99,443	12	99,437	7,613,369	76.6
6-7	0.00	99,431	11	99,425	7,513,932	75.6
7-8	0.00	99,420	10	99,415	7,414,507	74.6
8-9	0.00	99,410	9	99,405	7,315,093	73.6
9-10	0.00	99,400	9	99,396	7,215,688	72.6
10-11	0.00	99,392	8	99,388	7,116,292	71.6
11-12	0.00	99,384	8	99,380	7,016,904	70.6
12-13	0.00	99,375	10	99,370	6,917,525	69.6
13-14	0.00	99,365	13	99,359	6,818,154	68.6
14-15	0.00	99,352	17	99,344	6,718,795	67.6
15-16	0.00	99,335	22	99,324	6,619,452	66.6
16-17	0.00	99,313	26	99,300	6,520,128	65.7
17-18	0.00	99,287	30	99,272	6,420,828	64.7
18-19	0.00	99,256	34	99,239	6,321,556	63.7
19-20	0.00	99,223	37	99,204	6,222,317	62.7
20-21	0.00	99,186	40	99,165	6,123,113	61.7
21-22	0.00	99,145	44	99,124	6,023,947	60.8
22-23	0.00	99,102	47	99,078	5,924,824	59.8
23-24	0.00	99,055	49	99,031	5,825,745	58.8
24-25	0.00	99,006	51	98,981	5,726,715	57.8
25-26	0.00	98,955	53	98,928	5,627,734	56.9
26-27	0.00	98,902	56	98,874	5,528,806	55.9
27-28	0.00	98,846	58	98,817	5,429,932	54.9
28-29	0.00	98,788	61	98,758	5,331,114	54.0
29-30	0.00	98,727	64	98,695	5,232,357	53.0
30-31	0.00	98,663	68	98,629	5,133,662	52.0
31-32	0.00	98,595	73	98,559	5,035,033	51.1
32-33	0.00	98,522	77	98,484	4,936,474	50.1
33-34	0.00	98,445	81	98,405	4,837,990	49.1
34-35	0.00	98,364	86	98,321	4,739,586	48.2
35-36	0.00	98,278	91	98,233	4,641,264	47.2
36-37	0.00	98,187	97	98,139	4,543,031	46.3
37-38	0.00	98,090	104	98,038	4,444,893	45.3
38-39	0.00	97,986	111	97,931	4,346,855	44.4
39-40	0.00	97,876	118	97,816	4,248,924	43.4
40-41	0.00	97,757	126	97,694	4,151,107	42.5
41-42	0.00	97,631	136	97,563	4,053,413	41.5
42-43	0.00	97,495	149	97,420	3,955,850	40.6
43-44	0.00	97,346	164	97,264	3,858,430	39.6
44-45	0.00	97,182	182	97,091	3,761,166	38.7
45-46	0.00	97,000	200	96,900	3,664,075	37.8
46-47	0.00	96,800	217	96,692	3,567,175	36.9
47-48	0.00	96,584	235	96,466	3,470,483	35.9
48-49	0.00	96,349	255	96,221	3,374,017	35.0
49-50	0.00	96,094	277	95,955	3,277,796	34.1
50-51	0.00	95,817	300	95,667	3,181,841	33.2
51-52	0.00	95,517	324	95,355	3,086,174	32.3
52-53	0.00	95,193	346	95,020	2,990,819	31.4
53-54	0.00	94,847	367	94,663	2,895,799	30.5
54-55	0.00	94,480	388	94,286	2,801,136	29.6
55-56	0.00	94,092	410	93,887	2,706,850	28.8
56-57	0.00	93,682	435	93,464	2,612,963	27.9
57-58	0.00	93,247	466	93,014	2,519,499	27.0
58-59	0.01	92,781	503	92,530	2,426,485	26.2
59-60	0.01	92,278	545	92,006	2,333,955	25.3
60-61	0.01	91,733	591	91,438	2,241,949	24.4
61-62	0.01	91,142	638	90,823	2,150,512	23.6

Table 15. Life table for non-Hispanic white females: United States, 2010—Con.

	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.....	0.01	90,504	689	90,160	2,059,688	22.8
63-64.....	0.01	89,816	745	89,443	1,969,528	21.9
64-65.....	0.01	89,071	808	88,667	1,880,085	21.1
65-66.....	0.01	88,264	882	87,823	1,791,417	20.3
66-67.....	0.01	87,382	965	86,899	1,703,595	19.5
67-68.....	0.01	86,417	1,050	85,891	1,616,695	18.7
68-69.....	0.01	85,366	1,133	84,800	1,530,804	17.9
69-70.....	0.01	84,233	1,218	83,624	1,446,005	17.2
70-71.....	0.02	83,015	1,312	82,359	1,362,381	16.4
71-72.....	0.02	81,702	1,421	80,992	1,280,022	15.7
72-73.....	0.02	80,281	1,537	79,513	1,199,031	14.9
73-74.....	0.02	78,744	1,663	77,913	1,119,518	14.2
74-75.....	0.02	77,081	1,799	76,182	1,041,605	13.5
75-76.....	0.03	75,283	1,941	74,312	965,423	12.8
76-77.....	0.03	73,341	2,088	72,297	891,111	12.2
77-78.....	0.03	71,253	2,251	70,128	818,814	11.5
78-79.....	0.04	69,002	2,426	67,789	748,686	10.9
79-80.....	0.04	66,577	2,597	65,278	680,897	10.2
80-81.....	0.04	63,980	2,759	62,600	615,619	9.6
81-82.....	0.05	61,221	2,930	59,756	553,018	9.0
82-83.....	0.05	58,291	3,109	56,736	493,262	8.5
83-84.....	0.06	55,182	3,296	53,534	436,526	7.9
84-85.....	0.07	51,886	3,501	50,136	382,992	7.4
85-86.....	0.08	48,385	3,665	46,553	332,857	6.9
86-87.....	0.09	44,720	3,808	42,817	286,304	6.4
87-88.....	0.10	40,913	3,908	38,959	243,487	6.0
88-89.....	0.11	37,005	3,957	35,026	204,529	5.5
89-90.....	0.12	33,048	3,947	31,074	169,503	5.1
90-91.....	0.13	29,101	3,871	27,166	138,428	4.8
91-92.....	0.15	25,230	3,728	23,366	111,263	4.4
92-93.....	0.16	21,502	3,518	19,743	87,896	4.1
93-94.....	0.18	17,984	3,248	16,361	68,153	3.8
94-95.....	0.20	14,737	2,927	13,273	51,793	3.5
95-96.....	0.22	11,810	2,570	10,524	38,519	3.3
96-97.....	0.24	9,239	2,195	8,142	27,995	3.0
97-98.....	0.26	7,044	1,819	6,134	19,853	2.8
98-99.....	0.28	5,225	1,461	4,494	13,719	2.6
99-100.....	0.30	3,764	1,134	3,197	9,224	2.5
100 and over.....	1.00	2,629	2,629	6,028	6,028	2.3

Table 16. Life table for the non-Hispanic black population: United States, 2010

	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	0.01	100,000	1,141	99,004	7,472,031	74.7
1-2	0.00	98,859	68	98,825	7,373,028	74.6
2-3	0.00	98,791	44	98,769	7,274,203	73.6
3-4	0.00	98,746	28	98,732	7,175,434	72.7
4-5	0.00	98,718	23	98,707	7,076,702	71.7
5-6	0.00	98,695	21	98,685	6,977,995	70.7
6-7	0.00	98,674	18	98,665	6,879,311	69.7
7-8	0.00	98,656	16	98,648	6,780,646	68.7
8-9	0.00	98,640	14	98,633	6,681,998	67.7
9-10	0.00	98,626	12	98,621	6,583,364	66.8
10-11	0.00	98,615	11	98,609	6,484,744	65.8
11-12	0.00	98,604	12	98,598	6,386,134	64.8
12-13	0.00	98,592	16	98,584	6,287,536	63.8
13-14	0.00	98,576	25	98,563	6,188,952	62.8
14-15	0.00	98,551	36	98,533	6,090,389	61.8
15-16	0.00	98,514	47	98,491	5,991,856	60.8
16-17	0.00	98,467	58	98,438	5,893,366	59.9
17-18	0.00	98,409	69	98,375	5,794,928	58.9
18-19	0.00	98,340	80	98,300	5,696,553	57.9
19-20	0.00	98,260	92	98,214	5,598,253	57.0
20-21	0.00	98,168	107	98,114	5,500,039	56.0
21-22	0.00	98,061	121	98,001	5,401,925	55.1
22-23	0.00	97,941	132	97,875	5,303,924	54.2
23-24	0.00	97,809	138	97,740	5,206,049	53.2
24-25	0.00	97,671	140	97,602	5,108,309	52.3
25-26	0.00	97,532	140	97,462	5,010,707	51.4
26-27	0.00	97,391	142	97,320	4,913,246	50.4
27-28	0.00	97,249	144	97,177	4,815,925	49.5
28-29	0.00	97,105	148	97,031	4,718,748	48.6
29-30	0.00	96,956	153	96,880	4,621,718	47.7
30-31	0.00	96,803	159	96,724	4,524,838	46.7
31-32	0.00	96,645	164	96,563	4,428,114	45.8
32-33	0.00	96,481	170	96,396	4,331,551	44.9
33-34	0.00	96,311	175	96,223	4,235,155	44.0
34-35	0.00	96,136	182	96,045	4,138,932	43.1
35-36	0.00	95,954	190	95,859	4,042,887	42.1
36-37	0.00	95,764	199	95,664	3,947,028	41.2
37-38	0.00	95,565	209	95,460	3,851,364	40.3
38-39	0.00	95,356	220	95,246	3,755,904	39.4
39-40	0.00	95,136	232	95,019	3,660,658	38.5
40-41	0.00	94,903	246	94,780	3,565,639	37.6
41-42	0.00	94,657	263	94,526	3,470,859	36.7
42-43	0.00	94,395	284	94,253	3,376,333	35.8
43-44	0.00	94,111	309	93,957	3,282,080	34.9
44-45	0.00	93,802	338	93,633	3,188,123	34.0
45-46	0.00	93,464	368	93,280	3,094,490	33.1
46-47	0.00	93,096	398	92,897	3,001,210	32.2
47-48	0.00	92,698	434	92,481	2,908,313	31.4
48-49	0.01	92,264	476	92,026	2,815,832	30.5
49-50	0.01	91,788	524	91,527	2,723,805	29.7
50-51	0.01	91,265	573	90,978	2,632,279	28.8
51-52	0.01	90,692	623	90,380	2,541,300	28.0
52-53	0.01	90,069	675	89,732	2,450,920	27.2
53-54	0.01	89,394	732	89,028	2,361,188	26.4
54-55	0.01	88,662	792	88,266	2,272,160	25.6
55-56	0.01	87,870	859	87,441	2,183,894	24.9
56-57	0.01	87,011	928	86,547	2,096,454	24.1
57-58	0.01	86,083	994	85,586	2,009,906	23.3
58-59	0.01	85,089	1,052	84,563	1,924,320	22.6
59-60	0.01	84,037	1,104	83,485	1,839,757	21.9
60-61	0.01	82,933	1,156	82,355	1,756,272	21.2
61-62	0.01	81,777	1,213	81,170	1,673,917	20.5

Table 16. Life table for the non-Hispanic black population: United States, 2010—Con.

	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.....	0.02	80,563	1,270	79,928	1,592,747	19.8
63-64.....	0.02	79,293	1,329	78,629	1,512,819	19.1
64-65.....	0.02	77,964	1,392	77,268	1,434,190	18.4
65-66.....	0.02	76,572	1,460	75,842	1,356,922	17.7
66-67.....	0.02	75,113	1,535	74,345	1,281,079	17.1
67-68.....	0.02	73,578	1,613	72,771	1,206,734	16.4
68-69.....	0.02	71,964	1,693	71,118	1,133,963	15.8
69-70.....	0.03	70,272	1,772	69,386	1,062,845	15.1
70-71.....	0.03	68,500	1,849	67,575	993,460	14.5
71-72.....	0.03	66,651	1,923	65,690	925,884	13.9
72-73.....	0.03	64,728	2,008	63,724	860,195	13.3
73-74.....	0.03	62,720	2,102	61,669	796,470	12.7
74-75.....	0.04	60,618	2,183	59,527	734,801	12.1
75-76.....	0.04	58,435	2,272	57,300	675,274	11.6
76-77.....	0.04	56,164	2,365	54,982	617,975	11.0
77-78.....	0.05	53,799	2,448	52,575	562,993	10.5
78-79.....	0.05	51,351	2,524	50,089	510,418	9.9
79-80.....	0.05	48,827	2,615	47,519	460,329	9.4
80-81.....	0.06	46,212	2,726	44,849	412,810	8.9
81-82.....	0.06	43,486	2,776	42,099	367,961	8.5
82-83.....	0.07	40,711	2,800	39,311	325,862	8.0
83-84.....	0.08	37,910	2,846	36,487	286,551	7.6
84-85.....	0.08	35,064	2,897	33,616	250,064	7.1
85-86.....	0.09	32,168	2,940	30,698	216,448	6.7
86-87.....	0.10	29,228	2,899	27,778	185,751	6.4
87-88.....	0.11	26,329	2,831	24,913	157,972	6.0
88-89.....	0.12	23,498	2,735	22,130	133,059	5.7
89-90.....	0.13	20,763	2,613	19,456	110,929	5.3
90-91.....	0.14	18,150	2,466	16,916	91,473	5.0
91-92.....	0.15	15,683	2,298	14,534	74,556	4.8
92-93.....	0.16	13,385	2,111	12,330	60,022	4.5
93-94.....	0.17	11,274	1,911	10,319	47,692	4.2
94-95.....	0.18	9,363	1,703	8,512	37,373	4.0
95-96.....	0.19	7,661	1,492	6,915	28,861	3.8
96-97.....	0.21	6,169	1,284	5,527	21,947	3.6
97-98.....	0.22	4,885	1,085	4,343	16,420	3.4
98-99.....	0.24	3,800	898	3,351	12,077	3.2
99-100.....	0.25	2,902	729	2,537	8,726	3.0
100 and over.....	1.00	2,173	2,173	6,189	6,189	2.8

Table 17. Life table for non-Hispanic black males: United States, 2010

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	0.01	100,000	1,250	98,919	7,142,761	71.4
1-2	0.00	98,750	72	98,714	7,043,842	71.3
2-3	0.00	98,678	51	98,653	6,945,127	70.4
3-4	0.00	98,628	34	98,611	6,846,474	69.4
4-5	0.00	98,594	25	98,581	6,747,864	68.4
5-6	0.00	98,569	24	98,557	6,649,282	67.5
6-7	0.00	98,545	21	98,535	6,550,725	66.5
7-8	0.00	98,524	18	98,515	6,452,190	65.5
8-9	0.00	98,506	15	98,499	6,353,675	64.5
9-10	0.00	98,491	11	98,486	6,255,177	63.5
10-11	0.00	98,480	8	98,476	6,156,691	62.5
11-12	0.00	98,472	8	98,468	6,058,215	61.5
12-13	0.00	98,464	16	98,456	5,959,746	60.5
13-14	0.00	98,448	30	98,433	5,861,290	59.5
14-15	0.00	98,418	50	98,393	5,762,857	58.6
15-16	0.00	98,368	70	98,333	5,664,464	57.6
16-17	0.00	98,298	88	98,254	5,566,131	56.6
17-18	0.00	98,210	106	98,157	5,467,877	55.7
18-19	0.00	98,105	124	98,043	5,369,719	54.7
19-20	0.00	97,981	143	97,909	5,271,677	53.8
20-21	0.00	97,838	165	97,756	5,173,767	52.9
21-22	0.00	97,673	187	97,580	5,076,012	52.0
22-23	0.00	97,486	204	97,385	4,978,432	51.1
23-24	0.00	97,283	211	97,177	4,881,047	50.2
24-25	0.00	97,071	212	96,965	4,783,870	49.3
25-26	0.00	96,859	210	96,754	4,686,905	48.4
26-27	0.00	96,649	209	96,545	4,590,151	47.5
27-28	0.00	96,440	209	96,336	4,493,606	46.6
28-29	0.00	96,231	213	96,125	4,397,270	45.7
29-30	0.00	96,018	218	95,909	4,301,146	44.8
30-31	0.00	95,800	224	95,688	4,205,237	43.9
31-32	0.00	95,576	229	95,461	4,109,548	43.0
32-33	0.00	95,347	234	95,230	4,014,087	42.1
33-34	0.00	95,113	237	94,995	3,918,857	41.2
34-35	0.00	94,876	240	94,757	3,823,862	40.3
35-36	0.00	94,637	244	94,515	3,729,105	39.4
36-37	0.00	94,393	250	94,268	3,634,591	38.5
37-38	0.00	94,142	258	94,013	3,540,323	37.6
38-39	0.00	93,884	268	93,750	3,446,310	36.7
39-40	0.00	93,616	280	93,476	3,352,560	35.8
40-41	0.00	93,336	294	93,189	3,259,084	34.9
41-42	0.00	93,041	312	92,885	3,165,896	34.0
42-43	0.00	92,729	335	92,562	3,073,011	33.1
43-44	0.00	92,394	365	92,212	2,980,449	32.3
44-45	0.00	92,030	399	91,830	2,888,237	31.4
45-46	0.00	91,631	434	91,414	2,796,407	30.5
46-47	0.01	91,197	471	90,961	2,704,993	29.7
47-48	0.01	90,726	514	90,469	2,614,032	28.8
48-49	0.01	90,211	565	89,929	2,523,563	28.0
49-50	0.01	89,647	622	89,336	2,433,634	27.1
50-51	0.01	89,025	681	88,684	2,344,299	26.3
51-52	0.01	88,344	740	87,974	2,255,614	25.5
52-53	0.01	87,603	806	87,200	2,167,641	24.7
53-54	0.01	86,797	881	86,356	2,080,440	24.0
54-55	0.01	85,916	965	85,433	1,994,084	23.2
55-56	0.01	84,951	1,057	84,422	1,908,650	22.5
56-57	0.01	83,894	1,153	83,317	1,824,228	21.7
57-58	0.02	82,741	1,241	82,120	1,740,911	21.0
58-59	0.02	81,500	1,315	80,842	1,658,791	20.4
59-60	0.02	80,184	1,376	79,496	1,577,949	19.7
60-61	0.02	78,808	1,436	78,091	1,498,452	19.0
61-62	0.02	77,373	1,500	76,623	1,420,362	18.4

Table 17. Life table for non-Hispanic black males: United States, 2010—Con.

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.....	0.02	75,873	1,560	75,093	1,343,739	17.7
63-64.....	0.02	74,313	1,617	73,505	1,268,646	17.1
64-65.....	0.02	72,696	1,674	71,859	1,195,141	16.4
65-66.....	0.02	71,022	1,733	70,156	1,123,281	15.8
66-67.....	0.03	69,289	1,800	68,389	1,053,126	15.2
67-68.....	0.03	67,489	1,871	66,554	984,736	14.6
68-69.....	0.03	65,619	1,946	64,646	918,182	14.0
69-70.....	0.03	63,672	2,025	62,660	853,536	13.4
70-71.....	0.03	61,647	2,097	60,599	790,877	12.8
71-72.....	0.04	59,550	2,161	58,469	730,278	12.3
72-73.....	0.04	57,389	2,240	56,269	671,809	11.7
73-74.....	0.04	55,149	2,327	53,985	615,540	11.2
74-75.....	0.05	52,821	2,406	51,619	561,555	10.6
75-76.....	0.05	50,416	2,489	49,172	509,937	10.1
76-77.....	0.05	47,927	2,575	46,640	460,765	9.6
77-78.....	0.06	45,352	2,628	44,038	414,126	9.1
78-79.....	0.06	42,724	2,658	41,395	370,088	8.7
79-80.....	0.07	40,066	2,721	38,705	328,693	8.2
80-81.....	0.07	37,345	2,783	35,953	289,987	7.8
81-82.....	0.08	34,562	2,779	33,172	254,034	7.4
82-83.....	0.09	31,783	2,796	30,385	220,862	6.9
83-84.....	0.10	28,986	2,764	27,604	190,477	6.6
84-85.....	0.10	26,222	2,707	24,869	162,873	6.2
85-86.....	0.11	23,515	2,626	22,202	138,004	5.9
86-87.....	0.12	20,889	2,519	19,630	115,802	5.5
87-88.....	0.13	18,370	2,390	17,175	96,172	5.2
88-89.....	0.14	15,980	2,240	14,860	78,997	4.9
89-90.....	0.15	13,741	2,072	12,705	64,137	4.7
90-91.....	0.16	11,669	1,890	10,724	51,432	4.4
91-92.....	0.17	9,780	1,698	8,930	40,708	4.2
92-93.....	0.19	8,081	1,502	7,330	31,777	3.9
93-94.....	0.20	6,579	1,307	5,926	24,447	3.7
94-95.....	0.21	5,272	1,117	4,714	18,522	3.5
95-96.....	0.23	4,155	937	3,686	13,808	3.3
96-97.....	0.24	3,217	771	2,832	10,122	3.1
97-98.....	0.25	2,446	622	2,135	7,290	3.0
98-99.....	0.27	1,824	491	1,579	5,155	2.8
99-100.....	0.28	1,333	379	1,144	3,576	2.7
100 and over.....	1.00	954	954	2,432	2,432	2.5

Table 18. Life table for non-Hispanic black females: United States, 2010

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	0.01	100,000	1,029	99,092	7,771,599	77.7
1-2	0.00	98,971	61	98,941	7,672,507	77.5
2-3	0.00	98,910	36	98,892	7,573,566	76.6
3-4	0.00	98,874	22	98,863	7,474,674	75.6
4-5	0.00	98,852	20	98,842	7,375,811	74.6
5-6	0.00	98,832	17	98,824	7,276,968	73.6
6-7	0.00	98,815	15	98,808	7,178,145	72.6
7-8	0.00	98,801	13	98,794	7,079,337	71.7
8-9	0.00	98,788	12	98,782	6,980,542	70.7
9-10	0.00	98,776	12	98,770	6,881,761	69.7
10-11	0.00	98,764	13	98,757	6,782,991	68.7
11-12	0.00	98,751	14	98,744	6,684,233	67.7
12-13	0.00	98,737	16	98,728	6,585,490	66.7
13-14	0.00	98,720	19	98,711	6,486,761	65.7
14-15	0.00	98,702	21	98,691	6,388,051	64.7
15-16	0.00	98,680	24	98,668	6,289,360	63.7
16-17	0.00	98,656	27	98,643	6,190,691	62.8
17-18	0.00	98,630	30	98,614	6,092,048	61.8
18-19	0.00	98,599	35	98,582	5,993,434	60.8
19-20	0.00	98,564	41	98,543	5,894,852	59.8
20-21	0.00	98,523	48	98,499	5,796,309	58.8
21-22	0.00	98,475	55	98,448	5,697,810	57.9
22-23	0.00	98,421	61	98,390	5,599,362	56.9
23-24	0.00	98,360	66	98,327	5,500,972	55.9
24-25	0.00	98,294	70	98,259	5,402,645	55.0
25-26	0.00	98,224	74	98,187	5,304,386	54.0
26-27	0.00	98,150	79	98,111	5,206,198	53.0
27-28	0.00	98,071	84	98,029	5,108,088	52.1
28-29	0.00	97,987	88	97,943	5,010,058	51.1
29-30	0.00	97,899	93	97,853	4,912,115	50.2
30-31	0.00	97,806	98	97,757	4,814,263	49.2
31-32	0.00	97,708	104	97,656	4,716,506	48.3
32-33	0.00	97,604	111	97,549	4,618,850	47.3
33-34	0.00	97,493	119	97,434	4,521,301	46.4
34-35	0.00	97,374	129	97,309	4,423,867	45.4
35-36	0.00	97,245	141	97,175	4,326,558	44.5
36-37	0.00	97,104	153	97,028	4,229,383	43.6
37-38	0.00	96,952	165	96,869	4,132,355	42.6
38-39	0.00	96,787	176	96,699	4,035,486	41.7
39-40	0.00	96,611	188	96,516	3,938,787	40.8
40-41	0.00	96,422	202	96,321	3,842,271	39.8
41-42	0.00	96,221	217	96,112	3,745,949	38.9
42-43	0.00	96,004	236	95,886	3,649,837	38.0
43-44	0.00	95,768	258	95,639	3,553,952	37.1
44-45	0.00	95,510	282	95,369	3,458,312	36.2
45-46	0.00	95,228	306	95,075	3,362,943	35.3
46-47	0.00	94,922	331	94,757	3,267,868	34.4
47-48	0.00	94,591	360	94,411	3,173,111	33.5
48-49	0.00	94,231	394	94,034	3,078,700	32.7
49-50	0.00	93,837	433	93,620	2,984,666	31.8
50-51	0.01	93,404	474	93,167	2,891,046	31.0
51-52	0.01	92,930	514	92,673	2,797,879	30.1
52-53	0.01	92,416	554	92,138	2,705,207	29.3
53-54	0.01	91,861	594	91,564	2,613,069	28.4
54-55	0.01	91,267	634	90,950	2,521,504	27.6
55-56	0.01	90,633	678	90,294	2,430,554	26.8
56-57	0.01	89,955	724	89,593	2,340,260	26.0
57-58	0.01	89,231	770	88,846	2,250,667	25.2
58-59	0.01	88,461	814	88,054	2,161,820	24.4
59-60	0.01	87,647	857	87,219	2,073,766	23.7
60-61	0.01	86,790	902	86,339	1,986,548	22.9
61-62	0.01	85,887	952	85,412	1,900,209	22.1

Table 18. Life table for non-Hispanic black females: United States, 2010—Con.

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.....	0.01	84,936	1,006	84,433	1,814,797	21.4
63-64.....	0.01	83,930	1,066	83,397	1,730,364	20.6
64-65.....	0.01	82,864	1,135	82,297	1,646,967	19.9
65-66.....	0.01	81,729	1,212	81,123	1,564,671	19.1
66-67.....	0.02	80,518	1,296	79,870	1,483,547	18.4
67-68.....	0.02	79,222	1,382	78,531	1,403,678	17.7
68-69.....	0.02	77,840	1,466	77,107	1,325,147	17.0
69-70.....	0.02	76,374	1,546	75,601	1,248,039	16.3
70-71.....	0.02	74,829	1,627	74,015	1,172,438	15.7
71-72.....	0.02	73,202	1,710	72,347	1,098,423	15.0
72-73.....	0.03	71,492	1,801	70,592	1,026,076	14.4
73-74.....	0.03	69,691	1,905	68,739	955,484	13.7
74-75.....	0.03	67,786	1,991	66,791	886,745	13.1
75-76.....	0.03	65,796	2,088	64,752	819,954	12.5
76-77.....	0.03	63,708	2,191	62,612	755,203	11.9
77-78.....	0.04	61,517	2,307	60,363	692,591	11.3
78-79.....	0.04	59,209	2,429	57,995	632,228	10.7
79-80.....	0.04	56,781	2,551	55,506	574,232	10.1
80-81.....	0.05	54,230	2,709	52,876	518,727	9.6
81-82.....	0.05	51,522	2,812	50,116	465,851	9.0
82-83.....	0.06	48,710	2,889	47,266	415,735	8.5
83-84.....	0.07	45,821	2,997	44,323	368,470	8.0
84-85.....	0.07	42,824	3,121	41,264	324,147	7.6
85-86.....	0.08	39,703	3,203	38,102	282,883	7.1
86-87.....	0.09	36,500	3,227	34,887	244,781	6.7
87-88.....	0.10	33,273	3,220	31,663	209,895	6.3
88-89.....	0.11	30,053	3,179	28,464	178,232	5.9
89-90.....	0.12	26,874	3,102	25,323	149,768	5.6
90-91.....	0.13	23,772	2,990	22,277	124,445	5.2
91-92.....	0.14	20,782	2,844	19,360	102,168	4.9
92-93.....	0.15	17,938	2,665	16,606	82,807	4.6
93-94.....	0.16	15,273	2,460	14,043	66,202	4.3
94-95.....	0.17	12,813	2,232	11,697	52,159	4.1
95-96.....	0.19	10,581	1,989	9,586	40,462	3.8
96-97.....	0.20	8,592	1,740	7,722	30,875	3.6
97-98.....	0.22	6,852	1,491	6,107	23,154	3.4
98-99.....	0.23	5,361	1,250	4,736	17,047	3.2
99-100.....	0.25	4,111	1,025	3,598	12,311	3.0
100 and over.....	1.00	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—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:

$$F = \frac{D}{D^a} \quad (1)$$

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

$${}_nD_x = {}_nD_x^F * {}_nCR_x \quad (2)$$

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

Because NLMS classification ratios for infant deaths are unreliable due to small sample sizes, corrections for racial and ethnic misclassification of infant deaths are addressed by using infant death counts and live birth counts from the 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 $P_{y,x+1}$ 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) . . .	0.13	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.12

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:

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

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:

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

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

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

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

Finally, to close the table at age 100 and over (combined), ${}_{\infty}q_{100}$ is set equal to 1.0 because all survivors to this age will die at some point in the open-ended age interval. 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

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

Decrement function (d_x)

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

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

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

Person-years lived (L_x)

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

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

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

$$L_0 = fl_0 + (1 - f)l_1 \tag{18}$$

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	Number surviving	Number dying	Person-years lived	Total number of	Expectation of life
	between ages x to $x+n$	to age x	between ages x to $x+n$	between ages x to $x+n$	person-years lived above 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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