

## United States Life Tables, 2017

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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 2017.

**Methods**—Data used to prepare the 2017 life tables are 2017 final mortality statistics; July 1, 2017 population estimates based on the 2010 decennial census; and 2017 Medicare data for persons aged 66–99. The methodology used to estimate the life tables for the Hispanic population remains unchanged from that developed for the publication of life tables by Hispanic origin for data year 2006. The methodology used to estimate the 2017 life tables for all other groups was first implemented with data year 2008.

**Results**—In 2017, the overall expectation of life at birth was 78.6 years, decreasing from 78.7 in 2016. Between 2016 and 2017, life expectancy at birth decreased by 0.1 year for males (76.2 to 76.1) and did not change for females (81.1). Life expectancy at birth decreased by 0.1 year for the white population (78.9 to 78.8) and the non-Hispanic white population (78.6 to 78.5) between 2016 and 2017. Life expectancy at birth did not change from 2016 for the black population (75.3), the non-Hispanic black population (74.9), and the Hispanic population (81.8).

**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 2017 assumes a hypothetical cohort that is subject throughout its lifetime to the age-specific death rates prevailing for the actual population in 2017. The period life table may thus be characterized as rendering a snapshot of current mortality experience and shows the long-range implications of a set of age-specific death rates that prevailed in a given year. In this report, the term life table refers only to the period life table and not to the cohort life table.

Life tables can be classified in two ways according to the length of the age interval in which data are presented. A complete life table contains data for every single year of age. An abridged life table typically contains data by 5- or 10-year age intervals. A complete life table can easily be aggregated into 5- or 10-year age groups (see [Technical Notes](#) for instructions). Other than the decennial life tables, U.S. life tables based on data before 1997 are abridged life tables constructed by reference to a standard table (4). This report presents complete period life tables by race, Hispanic origin, and sex.

### Data and Methods

The data used to prepare the U.S. life tables for 2017 are final numbers of deaths for the year 2017; July 1, 2017 population estimates based on the 2010 decennial census; and age-specific death and population counts for Medicare beneficiaries aged 66–99 for the year 2017 from the Centers for Medicare & Medicaid Services. Data from the Medicare program



are used to supplement vital statistics and census data for ages 66 and over. The U.S. life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates using classification ratios (or correction factors) generated from an updated evaluation of race and Hispanic-origin misclassification on death certificates in the United States (5). (See [Technical Notes](#) for a detailed description of the data sets and methodology used to estimate Hispanic-origin life tables.)

## Expectation of life

The most frequently used life table statistic is life expectancy ( $e_x$ ), which is the average number of years of life remaining for persons who have attained a given age ( $x$ ). Life expectancy and other life table values for each age in 2017 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 2017 for the total population was 78.6 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, 57,839 persons out of the original 2017 hypothetical life table cohort of 100,000 (or 57.8%) were alive at exact age 80. In other words, the probability that a person will survive from birth to age 80, given 2017 age-specific mortality rates, is 57.8%. Probabilities of survival can be calculated at any age by simply dividing the number of survivors at the terminal age by the number at the beginning age. For example, to calculate the probability of surviving from age 20 to age 85, one would divide the number of survivors at age 85 (42,382) by the number of survivors at age 20 (98,937), which results in a 42.8% probability of survival.

## Explanation of life table columns

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

*Column 2. Probability of dying ( $q_x$ )*—Shows the probability of dying between ages  $x$  and  $x + 1$ . For example, for males in the age interval 20–21 years, the probability of dying is 0.001147 ([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, 99,477 will complete the first year of life and enter the second; 99,341 will reach age 10; 99,134 will reach age 20; and 49,264 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, 630 will die in the first year of life; 113 between ages 20 and 21; and 971 after reaching age 100 ([Table 2](#)). Each figure in column 4 is the difference between the 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 98,692 for males in the age interval 20–21 is the total number of years lived between the 20th and 21st birthdays by the 98,749 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, 5,626,672 is the total number of years lived after reaching age 20 by the 98,749 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 57.0 years (5,626,672 divided by 98,749) ([Table 2](#)).

## Results

### Life expectancy in the United States

[Tables 1–18](#) show complete life tables for 2017 by race (white and black), Hispanic origin, and sex. [Table A](#) summarizes life expectancy by age, race, Hispanic origin, and sex. Life expectancy at birth for 2017 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 2017. In 2017, life expectancy at birth was 78.6 years, decreasing by 0.1 year from 78.7 in 2016.

Changes in mortality by age and cause of death can have a major effect on life expectancy. Life expectancy between 2016 and 2017 decreased due to increases in mortality from unintentional injuries, suicide, diabetes, Alzheimer disease, Influenza and pneumonia, and decreases in mortality from cancer, heart disease, Viral hepatitis, HIV disease, and septicemia. For males, life expectancy decreased due to increases in mortality from unintentional injuries, suicide, diabetes, hypertension,

**Table A. Expectation of life, by age, race, Hispanic origin, race for the non-Hispanic population, and sex: United States, 2017**

| Age (years) | All races and origins |      |        | White |      |        | Black |      |        | Hispanic <sup>1</sup> |      |        | Non-Hispanic white <sup>1</sup> |      |        | Non-Hispanic black <sup>1</sup> |      |        |
|-------------|-----------------------|------|--------|-------|------|--------|-------|------|--------|-----------------------|------|--------|---------------------------------|------|--------|---------------------------------|------|--------|
|             | Total                 | Male | Female | Total | Male | Female | Total | Male | Female | Total                 | Male | Female | Total                           | Male | Female | Total                           | Male | Female |
| 0.....      | 78.6                  | 76.1 | 81.1   | 78.8  | 76.4 | 81.2   | 75.3  | 71.9 | 78.5   | 81.8                  | 79.1 | 84.3   | 78.5                            | 76.1 | 81.0   | 74.9                            | 71.5 | 78.1   |
| 1.....      | 78.1                  | 75.6 | 80.5   | 78.2  | 75.8 | 80.6   | 75.1  | 71.8 | 78.2   | 81.2                  | 78.5 | 83.7   | 77.9                            | 75.5 | 80.3   | 74.7                            | 71.4 | 77.9   |
| 5.....      | 74.1                  | 71.7 | 76.6   | 74.2  | 71.8 | 76.7   | 71.2  | 67.9 | 74.3   | 77.3                  | 74.6 | 79.8   | 74.0                            | 71.6 | 76.4   | 70.8                            | 67.5 | 74.0   |
| 10.....     | 69.2                  | 66.7 | 71.6   | 69.3  | 66.9 | 71.7   | 66.3  | 63.0 | 69.4   | 72.3                  | 69.6 | 74.8   | 69.0                            | 66.6 | 71.4   | 65.9                            | 62.5 | 69.0   |
| 15.....     | 64.2                  | 61.8 | 66.7   | 64.3  | 61.9 | 66.7   | 61.4  | 58.1 | 64.4   | 67.4                  | 64.7 | 69.8   | 64.0                            | 61.7 | 66.4   | 61.0                            | 57.6 | 64.1   |
| 20.....     | 59.4                  | 57.0 | 61.8   | 59.5  | 57.1 | 61.8   | 56.6  | 53.4 | 59.5   | 62.5                  | 59.9 | 64.9   | 59.2                            | 56.9 | 61.5   | 56.2                            | 53.0 | 59.2   |
| 25.....     | 54.7                  | 52.4 | 56.9   | 54.7  | 52.5 | 57.0   | 51.9  | 48.9 | 54.7   | 57.7                  | 55.2 | 60.1   | 54.5                            | 52.2 | 56.7   | 51.6                            | 48.5 | 54.4   |
| 30.....     | 50.0                  | 47.8 | 52.1   | 50.0  | 47.9 | 52.2   | 47.4  | 44.5 | 49.9   | 53.0                  | 50.5 | 55.2   | 49.8                            | 47.7 | 51.9   | 47.0                            | 44.1 | 49.6   |
| 35.....     | 45.3                  | 43.2 | 47.3   | 45.4  | 43.4 | 47.4   | 42.8  | 40.0 | 45.2   | 48.2                  | 45.8 | 50.3   | 45.2                            | 43.2 | 47.2   | 42.5                            | 39.7 | 44.9   |
| 40.....     | 40.7                  | 38.7 | 42.6   | 40.8  | 38.8 | 42.7   | 38.3  | 35.7 | 40.6   | 43.5                  | 41.2 | 45.5   | 40.6                            | 38.6 | 42.5   | 38.0                            | 35.3 | 40.3   |
| 45.....     | 36.1                  | 34.2 | 37.9   | 36.2  | 34.3 | 38.0   | 33.8  | 31.3 | 36.0   | 38.8                  | 36.6 | 40.7   | 36.0                            | 34.2 | 37.8   | 33.6                            | 31.0 | 35.8   |
| 50.....     | 31.6                  | 29.8 | 33.4   | 31.7  | 29.9 | 33.4   | 29.5  | 27.1 | 31.6   | 34.2                  | 32.1 | 36.0   | 31.6                            | 29.8 | 33.3   | 29.3                            | 26.9 | 31.4   |
| 55.....     | 27.4                  | 25.6 | 28.9   | 27.4  | 25.7 | 29.0   | 25.5  | 23.2 | 27.4   | 29.8                  | 27.7 | 31.4   | 27.3                            | 25.6 | 28.8   | 25.2                            | 23.0 | 27.2   |
| 60.....     | 23.3                  | 21.7 | 24.7   | 23.3  | 21.8 | 24.7   | 21.7  | 19.6 | 23.4   | 25.5                  | 23.6 | 27.0   | 23.2                            | 21.7 | 24.6   | 21.5                            | 19.4 | 23.3   |
| 65.....     | 19.4                  | 18.0 | 20.6   | 19.4  | 18.1 | 20.6   | 18.2  | 16.4 | 19.7   | 21.4                  | 19.7 | 22.7   | 19.3                            | 18.0 | 20.5   | 18.1                            | 16.2 | 19.5   |
| 70.....     | 15.7                  | 14.5 | 16.7   | 15.6  | 14.5 | 16.6   | 15.0  | 13.4 | 16.1   | 17.5                  | 16.0 | 18.6   | 15.6                            | 14.5 | 16.6   | 14.9                            | 13.3 | 16.0   |
| 75.....     | 12.3                  | 11.3 | 13.0   | 12.2  | 11.2 | 13.0   | 11.9  | 10.7 | 12.8   | 13.8                  | 12.6 | 14.7   | 12.2                            | 11.2 | 12.9   | 11.9                            | 10.6 | 12.7   |
| 80.....     | 9.2                   | 8.4  | 9.8    | 9.1   | 8.3  | 9.7    | 9.2   | 8.2  | 9.8    | 10.5                  | 9.4  | 11.1   | 9.1                             | 8.3  | 9.7    | 9.2                             | 8.1  | 9.8    |
| 85.....     | 6.6                   | 5.9  | 7.0    | 6.5   | 5.9  | 6.9    | 6.9   | 6.1  | 7.3    | 7.6                   | 6.7  | 8.0    | 6.5                             | 5.9  | 6.9    | 6.9                             | 6.1  | 7.3    |
| 90.....     | 4.5                   | 4.1  | 4.8    | 4.5   | 4.0  | 4.7    | 5.1   | 4.5  | 5.2    | 5.3                   | 4.6  | 5.5    | 4.5                             | 4.0  | 4.7    | 5.0                             | 4.5  | 5.2    |
| 95.....     | 3.1                   | 2.8  | 3.2    | 3.0   | 2.7  | 3.2    | 3.7   | 3.3  | 3.7    | 3.6                   | 3.2  | 3.7    | 3.0                             | 2.7  | 3.2    | 3.6                             | 3.3  | 3.7    |
| 100.....    | 2.2                   | 2.0  | 2.2    | 2.1   | 1.9  | 2.2    | 2.7   | 2.5  | 2.7    | 2.6                   | 2.2  | 2.6    | 2.1                             | 1.9  | 2.2    | 2.7                             | 2.5  | 2.7    |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table B. Number of survivors out of 100,000 born alive, by age, race, Hispanic origin, race for non-Hispanic population, and sex: United States, 2017**

| Age (years) | All races and origins |         |         | White   |         |         | Black   |         |         | Hispanic <sup>1</sup> |         |         | Non-Hispanic white <sup>1</sup> |         |         | Non-Hispanic black <sup>1</sup> |         |         |
|-------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------------|---------|---------|---------------------------------|---------|---------|---------------------------------|---------|---------|
|             | 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           | 99,422                | 99,370  | 99,477  | 99,516  | 99,473  | 99,562  | 98,920  | 98,812  | 99,033  | 99,491                | 99,461  | 99,523  | 99,533                          | 99,483  | 99,585  | 98,911                          | 98,812  | 99,013  |
| 5           | 99,326                | 99,261  | 99,393  | 99,429  | 99,373  | 99,489  | 98,771  | 98,653  | 98,894  | 99,415                | 99,379  | 99,454  | 99,444                          | 99,371  | 99,520  | 98,748                          | 98,653  | 98,866  |
| 10          | 99,268                | 99,199  | 99,341  | 99,377  | 99,316  | 99,440  | 98,686  | 98,560  | 98,815  | 99,366                | 99,328  | 99,408  | 99,392                          | 99,310  | 99,478  | 98,654                          | 98,560  | 98,783  |
| 15          | 99,191                | 99,107  | 99,280  | 99,304  | 99,230  | 99,382  | 98,578  | 98,425  | 98,736  | 99,305                | 99,256  | 99,359  | 99,318                          | 99,216  | 99,425  | 98,536                          | 98,423  | 98,700  |
| 20          | 98,937                | 98,749  | 99,134  | 99,066  | 98,906  | 99,235  | 98,208  | 97,853  | 98,576  | 99,091                | 98,970  | 99,221  | 99,080                          | 98,892  | 99,278  | 98,134                          | 97,803  | 98,525  |
| 25          | 98,466                | 98,071  | 98,883  | 98,613  | 98,262  | 98,987  | 97,555  | 96,871  | 98,267  | 98,727                | 98,447  | 99,032  | 98,613                          | 98,234  | 99,013  | 97,430                          | 96,746  | 98,189  |
| 30          | 97,872                | 97,235  | 98,543  | 98,025  | 97,439  | 98,646  | 96,763  | 95,718  | 97,843  | 98,284                | 97,800  | 98,814  | 97,983                          | 97,360  | 98,639  | 96,610                          | 95,560  | 97,742  |
| 35          | 97,163                | 96,284  | 98,083  | 97,312  | 96,493  | 98,180  | 95,837  | 94,433  | 97,263  | 97,799                | 97,133  | 98,532  | 97,204                          | 96,327  | 98,122  | 95,641                          | 94,229  | 97,125  |
| 40          | 96,321                | 95,196  | 97,493  | 96,477  | 95,422  | 97,593  | 94,682  | 92,897  | 96,464  | 97,221                | 96,341  | 98,184  | 96,298                          | 95,173  | 97,473  | 94,407                          | 92,586  | 96,271  |
| 45          | 95,275                | 93,903  | 96,697  | 95,447  | 94,151  | 96,814  | 93,210  | 91,066  | 95,322  | 96,506                | 95,387  | 97,717  | 95,181                          | 93,808  | 96,614  | 92,840                          | 90,636  | 95,055  |
| 50          | 93,797                | 92,105  | 95,543  | 93,997  | 92,391  | 95,687  | 91,184  | 88,591  | 93,711  | 95,438                | 94,048  | 96,936  | 93,649                          | 91,968  | 95,402  | 90,725                          | 88,051  | 93,374  |
| 55          | 91,538                | 89,365  | 93,768  | 91,783  | 89,701  | 93,962  | 88,154  | 84,962  | 91,241  | 93,759                | 91,914  | 95,738  | 91,353                          | 89,207  | 93,581  | 87,588                          | 84,296  | 90,812  |
| 60          | 88,226                | 85,344  | 91,162  | 88,554  | 85,778  | 91,438  | 83,613  | 79,494  | 87,562  | 91,332                | 88,832  | 93,974  | 88,032                          | 85,203  | 90,956  | 82,936                          | 78,732  | 87,013  |
| 65          | 83,696                | 79,838  | 87,596  | 84,141  | 80,425  | 87,973  | 77,385  | 71,895  | 82,583  | 87,731                | 84,329  | 91,241  | 83,559                          | 79,807  | 87,420  | 76,584                          | 71,027  | 81,897  |
| 70          | 77,697                | 72,785  | 82,637  | 78,242  | 73,517  | 83,087  | 69,560  | 62,551  | 76,127  | 82,920                | 78,413  | 87,438  | 77,632                          | 72,896  | 82,492  | 68,613                          | 61,536  | 75,293  |
| 75          | 69,418                | 63,524  | 75,344  | 69,933  | 64,248  | 75,748  | 60,137  | 51,909  | 67,819  | 76,164                | 70,358  | 81,818  | 69,308                          | 63,649  | 75,113  | 59,109                          | 50,854  | 66,870  |
| 80          | 57,839                | 51,095  | 64,591  | 58,237  | 51,682  | 64,899  | 48,332  | 39,528  | 56,516  | 66,348                | 59,261  | 73,047  | 57,607                          | 51,115  | 64,231  | 47,325                          | 38,543  | 55,541  |
| 85          | 42,382                | 35,439  | 49,264  | 42,559  | 35,762  | 49,376  | 34,458  | 26,042  | 42,199  | 52,244                | 44,188  | 59,497  | 42,000                          | 35,287  | 48,761  | 33,600                          | 25,258  | 41,324  |
| 90          | 24,560                | 18,687  | 30,222  | 24,480  | 18,708  | 30,103  | 20,106  | 13,662  | 26,129  | 34,151                | 26,219  | 40,715  | 24,097                          | 18,400  | 29,665  | 19,644                          | 13,175  | 25,499  |
| 95          | 9,361                 | 6,070   | 12,383  | 9,125   | 5,903   | 12,097  | 8,620   | 5,016   | 11,754  | 15,837                | 10,234  | 19,864  | 8,964                           | 5,791   | 11,901  | 8,353                           | 4,820   | 11,445  |
| 100         | 1,894                 | 971     | 2,697   | 1,761   | 886     | 2,524   | 2,390   | 1,128   | 3,289   | 4,304                 | 2,127   | 5,582   | 1,730                           | 869     | 2,483   | 2,255                           | 1,086   | 3,205   |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

and decreases in mortality from cancer, septicemia, Chronic lower respiratory diseases, Viral hepatitis, and HIV disease. Life expectancy did not change for females between 2016 and 2017 due to decreases in mortality from cancer, heart disease, perinatal conditions, congenital malformations, Viral hepatitis, and increases in mortality from unintentional injuries, Alzheimer disease, Influenza and pneumonia, Chronic lower respiratory diseases, and Nutritional deficiencies (6).

The difference in life expectancy between the sexes was 5.0 years in 2017, increasing by 0.1 year from the difference in 2016. From 1900 to 1975, the difference in life expectancy between the sexes increased from 2.0 years to 7.8 years (Table 19). The increasing gap during these years is attributed to increases in male mortality due to ischemic heart disease and lung cancer, both of which increased largely as the result of men's early and widespread adoption of cigarette smoking (7,8). Between 1979 and 2010, the difference in life expectancy between the sexes narrowed from 7.8 years to 4.8 years and remained at this level through 2015. It has increased every year since 2015 (Table 19).

The 2017 life table may be used to compare life expectancy at any age from birth onward. On the basis of mortality experienced in 2017, a person aged 65 could expect to live an average of 19.4 more years, for a total of 84.4 years; a person aged 85 could expect to live an additional 6.6 years, for a total of 91.6 years; and a person aged 100 could expect to live an additional 2.2 years, on average (Table A).

## Life expectancy by race

Between 2016 and 2017, life expectancy decreased by 0.1 year for the white population (78.9 to 78.8) and did not change for the black population (75.3) (Table 19). The difference in life expectancy between the white and black populations was 3.5 years in 2017, 0.1 year above the historically record low level of 3.4 attained in 2015. The white–black difference in life expectancy narrowed from 14.6 years in 1900 to 5.7 years in 1982, but increased to 7.1 years in 1993 before beginning to decline again in 1994 (Table 19). The increase in the gap from 1983 to 1993 was largely the result of increases in mortality among the black male population due to HIV infection and homicide (8).

Among the four race–sex groups (Figure 1), white females continued to have the highest life expectancy at birth (81.2), followed by black females (78.5), white males (76.4), and black males (71.9). Between 2016 and 2017, life expectancy decreased by 0.1 year for black males (72.0 to 71.9) and increased by 0.2 year for black females (78.3 to 78.5). Black males experienced a decline in life expectancy every year for 1984–1989 (8), followed by annual increases in 1990–1992 and 1994–2012. Between 2016 and 2017, life expectancy declined by 0.1 year for white females (81.3 to 81.2). It remained unchanged for white males (76.4). Overall, gains in life expectancy between 1980 and 2017 were 8.1 years for black males, 6.0 years for black females, 5.7 years for white males, and 3.1 years for white females (Table 19).

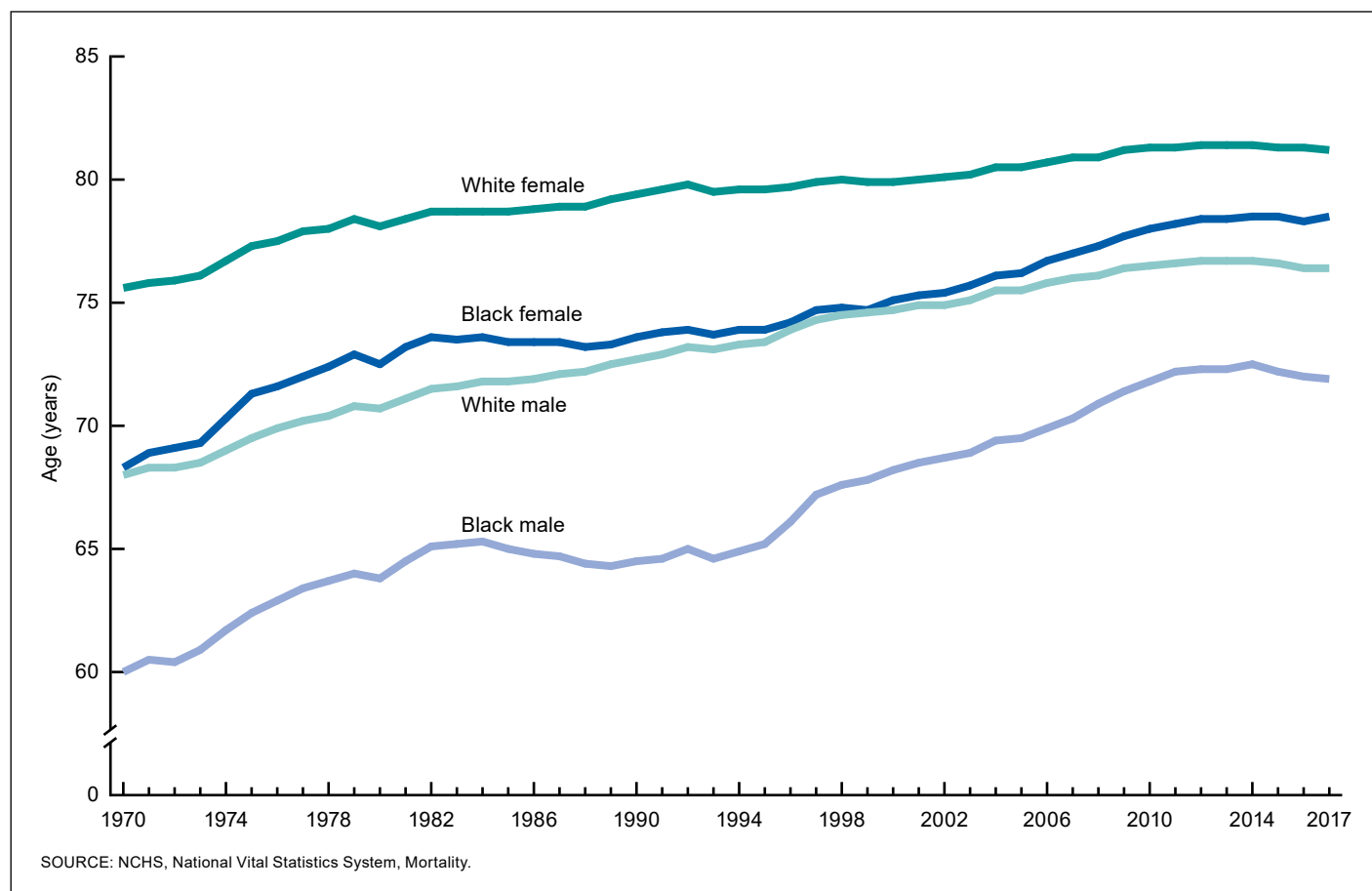
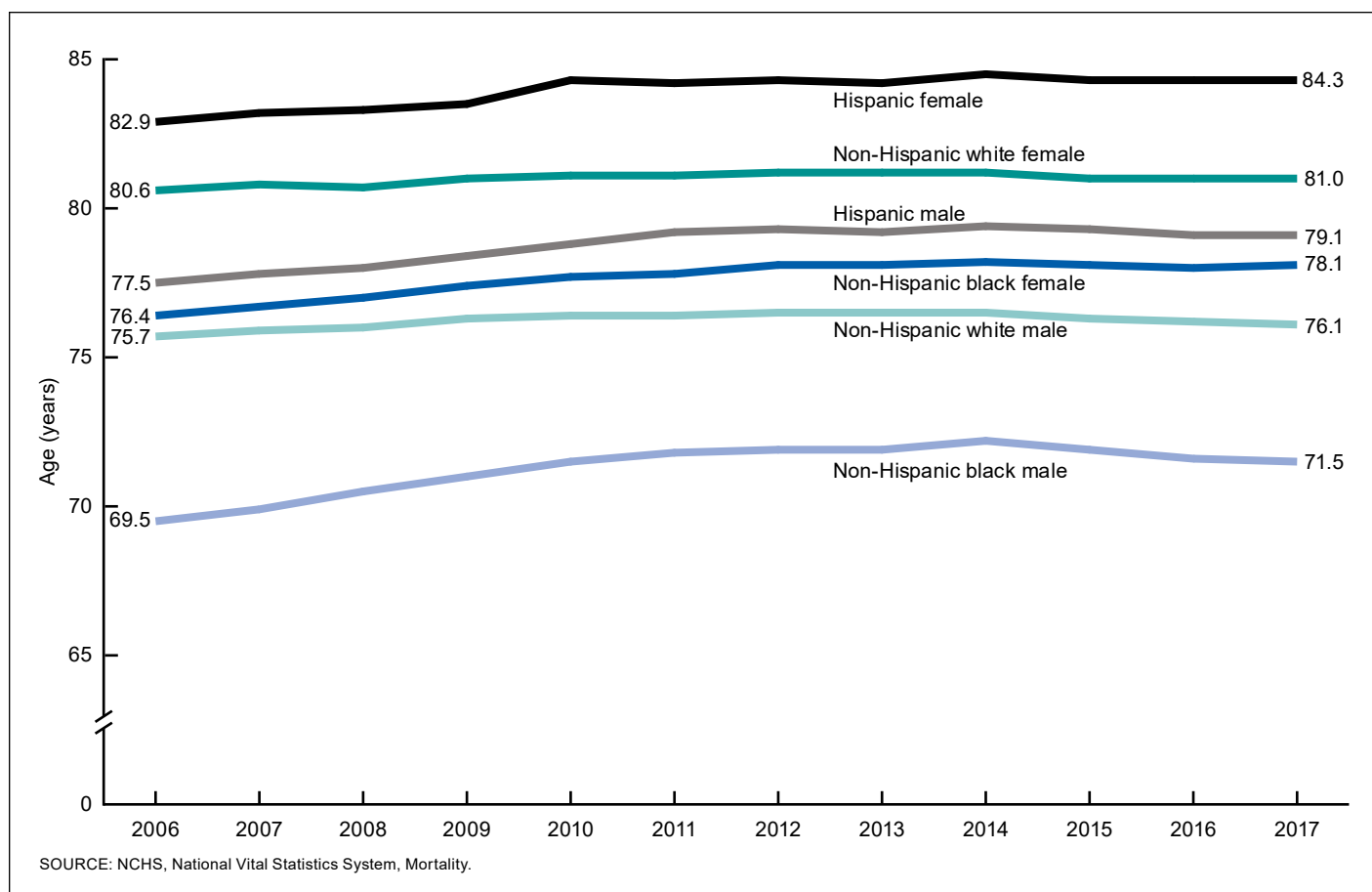


Figure 1. Life expectancy at birth, by race and sex: United States, 1970–2017



**Figure 2. Life expectancy at birth, by Hispanic origin, race, and sex: United States, 2006–2017**

### Life expectancy by Hispanic origin

Between 2016 and 2017, life expectancy decreased by 0.1 year for the non-Hispanic white population (78.6 to 78.5). It remained unchanged for the Hispanic population (81.8) and the non-Hispanic black population (74.9) (Table 19). In 2017, the Hispanic population had a life expectancy advantage at birth of 3.3 years over the non-Hispanic white population and 6.9 years over the non-Hispanic black population. The U.S. life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates (see Technical Notes for a detailed description of the methodology).

Among the six Hispanic-origin race–sex groups (Figure 2), Hispanic females continued to have the highest life expectancy at birth (84.3 years), followed by non-Hispanic white females (81.0), Hispanic males (79.1), non-Hispanic black females (78.1), non-Hispanic white males (76.1), and non-Hispanic black males (71.5). The smallest difference is between Hispanic males and non-Hispanic black females, with Hispanic males having an advantage of 1.0 year. The largest difference is between Hispanic females and non-Hispanic black males, with Hispanic females having a life expectancy at birth 12.8 years greater.

The Hispanic mortality advantage is also evident in the effect produced on life expectancy at birth when race and Hispanic origin are considered separately. Until 2006, U.S. life tables were produced only by race (white and black), 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 75.3 years in 2017 but was 74.9 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 78.8 years in 2017, but was 78.5 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 2017. Table 20 shows trends in survivorship from 1900 to 2017. In 2017, 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 2017 period life table cohort, 57.8% survived to age 80 and 1.9% survived to age 100. In 1900, 13.5% of the life table cohort survived to age 80 and only 0.03% survived to age 100 (Table 20).

## Survivorship by race

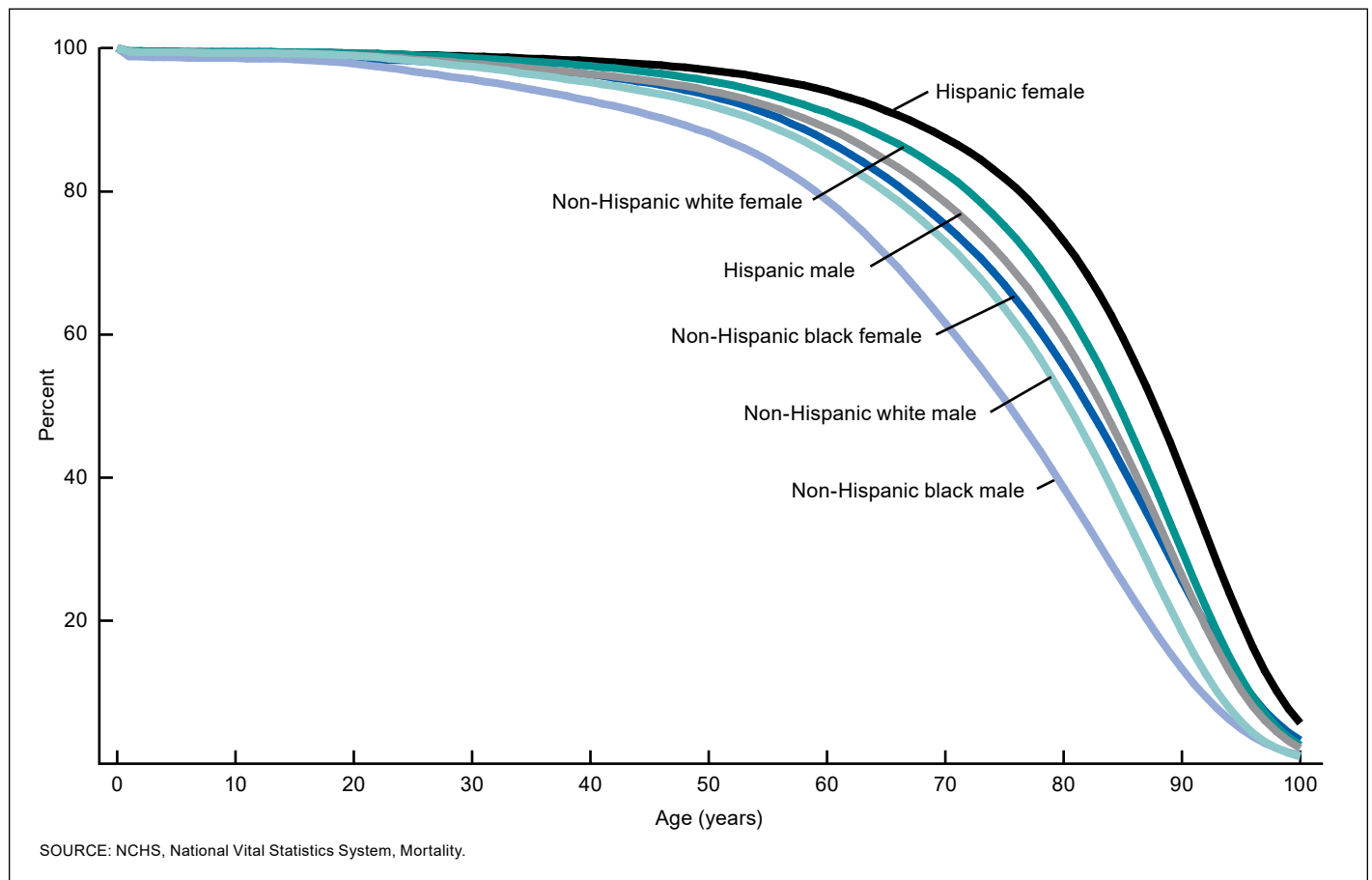
Among the four race–sex groups, white females have the highest median age at death, with about 49.4% surviving to age 85 (Tables 4–9). Of the original hypothetical cohort of 100,000 infant white females, 99.2% survive to age 20, 88.0% survive to age 65, and 49.4% survive to age 85 (Table 6). White males have slightly higher survival rates than black females at the younger ages, with 98.9% surviving to age 20 compared with 98.6% of black females (Tables 5 and 9). At the older ages, however, black female survival surpasses white male survival. By age 85, white male survival is 35.8% compared with 42.2% 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 (Tables 6 and 8). Among black males, 97.9% survive to age 20, 71.9% to age 65, and 26.0% to age 85. By age 100, there is very little difference between the white and black populations in terms of survival. For example, 1.0% of white males, 1.1% of black males, 2.5% of white females, and 3.3% of black females survive to age 100.

## Survivorship by Hispanic origin

In 2017, 99.5% of Hispanic and non-Hispanic white infants survived the first year of life, compared with 98.9% of

non-Hispanic black infants (Tables 10–19). For both the Hispanic and non-Hispanic white populations, 99.1% survived to age 20, while 98.1% of the non-Hispanic black population survived to age 20. By age 65, the Hispanic population has a clear survival advantage compared with the other two populations. Overall, 87.7% of the Hispanic population survived to age 65 compared with 83.6% 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, 52.2% of the Hispanic population has survived compared with 42.0% of the non-Hispanic white and 33.6% of the non-Hispanic black populations.

Among the six Hispanic-origin race–sex groups, Hispanic females have the highest median age at death, with 48.8% surviving to age 88 (Figure 3). The group with the next highest median age at death is non-Hispanic white females, with 48.8% surviving to age 85. Hispanic males had 50.7% surviving to age 83; followed by non-Hispanic black females, with 50.1% surviving to age 82; non-Hispanic white males, with 48.2% surviving to age 81; and non-Hispanic black males, with 48.5% surviving to age 76 (see Technical Notes).



**Figure 3. Percentage surviving, by Hispanic origin, race, age, and sex: United States, 2017**

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**Table 1. Life table for the total population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table01.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table01.xlsx).

| Age (years) | Probability of dying<br>between ages<br>$x$ and $x + 1$ | Number<br>surviving to<br>age $x$ | Number dying<br>between<br>ages $x$ and $x + 1$ | Person-years lived<br>between<br>ages $x$ and $x + 1$ | Total number of<br>person-years lived<br>above age $x$ | Expectation of<br>life at age $x$ |
|-------------|---|-----------------------------------|---|---|--|-----------------------------------|
|             | $q_x$   | $l_x$                             | $d_x$   | $L_x$   | $T_x$  | $e_x$                             |
| 0-1.....    | 0.005777  | 100,000                           | 578   | 99,493  | 7,860,752  | 78.6                              |
| 1-2.....    | 0.000382  | 99,422                            | 38  | 99,403  | 7,761,259  | 78.1                              |
| 2-3.....    | 0.000248  | 99,384                            | 25  | 99,372  | 7,661,855  | 77.1                              |
| 3-4.....    | 0.000193  | 99,360                            | 19  | 99,350  | 7,562,483  | 76.1                              |
| 4-5.....    | 0.000149  | 99,341                            | 15  | 99,333  | 7,463,133  | 75.1                              |
| 5-6.....    | 0.000141  | 99,326                            | 14  | 99,319  | 7,363,800  | 74.1                              |
| 6-7.....    | 0.000126  | 99,312                            | 13  | 99,305  | 7,264,481  | 73.1                              |
| 7-8.....    | 0.000114  | 99,299                            | 11  | 99,294  | 7,165,176  | 72.2                              |
| 8-9.....    | 0.000104  | 99,288                            | 10  | 99,283  | 7,065,882  | 71.2                              |
| 9-10.....   | 0.000095  | 99,278                            | 9   | 99,273  | 6,966,600  | 70.2                              |
| 10-11.....  | 0.000093  | 99,268                            | 9   | 99,264  | 6,867,327  | 69.2                              |
| 11-12.....  | 0.000103  | 99,259                            | 10  | 99,254  | 6,768,063  | 68.2                              |
| 12-13.....  | 0.000133  | 99,249                            | 13  | 99,242  | 6,668,809  | 67.2                              |
| 13-14.....  | 0.000186  | 99,236                            | 18  | 99,226  | 6,569,567  | 66.2                              |
| 14-15.....  | 0.000258  | 99,217                            | 26  | 99,204  | 6,470,341  | 65.2                              |
| 15-16.....  | 0.000338  | 99,191                            | 34  | 99,175  | 6,371,137  | 64.2                              |
| 16-17.....  | 0.000421  | 99,158                            | 42  | 99,137  | 6,271,962  | 63.3                              |
| 17-18.....  | 0.000510  | 99,116                            | 51  | 99,091  | 6,172,825  | 62.3                              |
| 18-19.....  | 0.000603  | 99,066                            | 60  | 99,036  | 6,073,734  | 61.3                              |
| 19-20.....  | 0.000698  | 99,006                            | 69  | 98,971  | 5,974,699  | 60.3                              |
| 20-21.....  | 0.000795  | 98,937                            | 79  | 98,897  | 5,875,727  | 59.4                              |
| 21-22.....  | 0.000889  | 98,858                            | 88  | 98,814  | 5,776,830  | 58.4                              |
| 22-23.....  | 0.000970  | 98,770                            | 96  | 98,722  | 5,678,016  | 57.5                              |
| 23-24.....  | 0.001032  | 98,674                            | 102   | 98,623  | 5,579,293  | 56.5                              |
| 24-25.....  | 0.001080  | 98,573                            | 106   | 98,519  | 5,480,670  | 55.6                              |
| 25-26.....  | 0.001123  | 98,466                            | 111   | 98,411  | 5,382,151  | 54.7                              |
| 26-27.....  | 0.001165  | 98,355                            | 115   | 98,298  | 5,283,740  | 53.7                              |
| 27-28.....  | 0.001207  | 98,241                            | 119   | 98,182  | 5,185,442  | 52.8                              |
| 28-29.....  | 0.001252  | 98,122                            | 123   | 98,061  | 5,087,260  | 51.8                              |
| 29-30.....  | 0.001300  | 97,999                            | 127   | 97,936  | 4,989,199  | 50.9                              |
| 30-31.....  | 0.001351  | 97,872                            | 132   | 97,806  | 4,891,263  | 50.0                              |
| 31-32.....  | 0.001402  | 97,740                            | 137   | 97,671  | 4,793,457  | 49.0                              |
| 32-33.....  | 0.001454  | 97,603                            | 142   | 97,532  | 4,695,786  | 48.1                              |
| 33-34.....  | 0.001506  | 97,461                            | 147   | 97,388  | 4,598,254  | 47.2                              |
| 34-35.....  | 0.001556  | 97,314                            | 151   | 97,238  | 4,500,867  | 46.3                              |
| 35-36.....  | 0.001615  | 97,163                            | 157   | 97,084  | 4,403,628  | 45.3                              |
| 36-37.....  | 0.001679  | 97,006                            | 163   | 96,924  | 4,306,544  | 44.4                              |
| 37-38.....  | 0.001740  | 96,843                            | 168   | 96,759  | 4,209,619  | 43.5                              |
| 38-39.....  | 0.001798  | 96,674                            | 174   | 96,588  | 4,112,861  | 42.5                              |
| 39-40.....  | 0.001860  | 96,501                            | 179   | 96,411  | 4,016,273  | 41.6                              |
| 40-41.....  | 0.001936  | 96,321                            | 186   | 96,228  | 3,919,862  | 40.7                              |
| 41-42.....  | 0.002036  | 96,135                            | 196   | 96,037  | 3,823,634  | 39.8                              |
| 42-43.....  | 0.002160  | 95,939                            | 207   | 95,835  | 3,727,597  | 38.9                              |
| 43-44.....  | 0.002306  | 95,732                            | 221   | 95,621  | 3,631,762  | 37.9                              |
| 44-45.....  | 0.002470  | 95,511                            | 236   | 95,393  | 3,536,140  | 37.0                              |
| 45-46.....  | 0.002647  | 95,275                            | 252   | 95,149  | 3,440,747  | 36.1                              |
| 46-47.....  | 0.002846  | 95,023                            | 270   | 94,888  | 3,345,598  | 35.2                              |
| 47-48.....  | 0.003079  | 94,753                            | 292   | 94,607  | 3,250,710  | 34.3                              |
| 48-49.....  | 0.003357  | 94,461                            | 317   | 94,302  | 3,156,104  | 33.4                              |
| 49-50.....  | 0.003682  | 94,144                            | 347   | 93,970  | 3,061,801  | 32.5                              |
| 50-51.....  | 0.004030  | 93,797                            | 378   | 93,608  | 2,967,831  | 31.6                              |
| 51-52.....  | 0.004401  | 93,419                            | 411   | 93,214  | 2,874,223  | 30.8                              |
| 52-53.....  | 0.004820  | 93,008                            | 448   | 92,784  | 2,781,009  | 29.9                              |
| 53-54.....  | 0.005285  | 92,560                            | 489   | 92,315  | 2,688,226  | 29.0                              |
| 54-55.....  | 0.005778  | 92,070                            | 532   | 91,804  | 2,595,911  | 28.2                              |
| 55-56.....  | 0.006284  | 91,538                            | 575   | 91,251  | 2,504,106  | 27.4                              |
| 56-57.....  | 0.006794  | 90,963                            | 618   | 90,654  | 2,412,855  | 26.5                              |
| 57-58.....  | 0.007319  | 90,345                            | 661   | 90,015  | 2,322,201  | 25.7                              |
| 58-59.....  | 0.007869  | 89,684                            | 706   | 89,331  | 2,232,186  | 24.9                              |
| 59-60.....  | 0.008456  | 88,978                            | 752   | 88,602  | 2,142,855  | 24.1                              |
| 60-61.....  | 0.009093  | 88,226                            | 802   | 87,825  | 2,054,253  | 23.3                              |

**Table 1. Life table for the total population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table01.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table01.xlsx).

| Age (years)       | Probability of dying<br>between ages<br>$x$ and $x + 1$ | Number<br>surviving to<br>age $x$ | Number dying<br>between<br>ages $x$ and $x + 1$ | Person-years lived<br>between<br>ages $x$ and $x + 1$ | Total number of<br>person-years lived<br>above age $x$ | Expectation of<br>life at age $x$ |
|-------------------|---|-----------------------------------|---|---|--|-----------------------------------|
|                   | $q_x$   | $l_x$                             | $d_x$   | $L_x$   | $T_x$  | $e_x$                             |
| 61–62.....        | 0.009768  | 87,424                            | 854   | 86,997  | 1,966,428  | 22.5                              |
| 62–63.....        | 0.010467  | 86,570                            | 906   | 86,117  | 1,879,431  | 21.7                              |
| 63–64.....        | 0.011181  | 85,664                            | 958   | 85,185  | 1,793,315  | 20.9                              |
| 64–65.....        | 0.011922  | 84,706                            | 1,010   | 84,201  | 1,708,130  | 20.2                              |
| 65–66.....        | 0.012710  | 83,696                            | 1,064   | 83,164  | 1,623,929  | 19.4                              |
| 66–67.....        | 0.013621  | 82,632                            | 1,126   | 82,069  | 1,540,765  | 18.6                              |
| 67–68.....        | 0.014620  | 81,507                            | 1,192   | 80,911  | 1,458,695  | 17.9                              |
| 68–69.....        | 0.015770  | 80,315                            | 1,267   | 79,682  | 1,377,785  | 17.2                              |
| 69–70.....        | 0.017100  | 79,048                            | 1,352   | 78,373  | 1,298,103  | 16.4                              |
| 70–71.....        | 0.018428  | 77,697                            | 1,432   | 76,981  | 1,219,730  | 15.7                              |
| 71–72.....        | 0.020317  | 76,265                            | 1,549   | 75,490  | 1,142,750  | 15.0                              |
| 72–73.....        | 0.022102  | 74,715                            | 1,651   | 73,890  | 1,067,259  | 14.3                              |
| 73–74.....        | 0.024194  | 73,064                            | 1,768   | 72,180  | 993,370  | 13.6                              |
| 74–75.....        | 0.026342  | 71,296                            | 1,878   | 70,357  | 921,190  | 12.9                              |
| 75–76.....        | 0.029042  | 69,418                            | 2,016   | 68,410  | 850,832  | 12.3                              |
| 76–77.....        | 0.032001  | 67,402                            | 2,157   | 66,324  | 782,422  | 11.6                              |
| 77–78.....        | 0.035443  | 65,245                            | 2,313   | 64,089  | 716,098  | 11.0                              |
| 78–79.....        | 0.039257  | 62,933                            | 2,471   | 61,698  | 652,009  | 10.4                              |
| 79–80.....        | 0.043393  | 60,462                            | 2,624   | 59,150  | 590,312  | 9.8                               |
| 80–81.....        | 0.048163  | 57,839                            | 2,786   | 56,446  | 531,161  | 9.2                               |
| 81–82.....        | 0.053216  | 55,053                            | 2,930   | 53,588  | 474,715  | 8.6                               |
| 82–83.....        | 0.059240  | 52,123                            | 3,088   | 50,579  | 421,127  | 8.1                               |
| 83–84.....        | 0.066564  | 49,035                            | 3,264   | 47,403  | 370,548  | 7.6                               |
| 84–85.....        | 0.074045  | 45,771                            | 3,389   | 44,077  | 323,145  | 7.1                               |
| 85–86.....        | 0.081954  | 42,382                            | 3,473   | 40,646  | 279,068  | 6.6                               |
| 86–87.....        | 0.090879  | 38,909                            | 3,536   | 37,141  | 238,422  | 6.1                               |
| 87–88.....        | 0.101938  | 35,373                            | 3,606   | 33,570  | 201,281  | 5.7                               |
| 88–89.....        | 0.114075  | 31,767                            | 3,624   | 29,955  | 167,711  | 5.3                               |
| 89–90.....        | 0.127331  | 28,143                            | 3,584   | 26,352  | 137,756  | 4.9                               |
| 90–91.....        | 0.141733  | 24,560                            | 3,481   | 22,819  | 111,405  | 4.5                               |
| 91–92.....        | 0.157289  | 21,079                            | 3,315   | 19,421  | 88,585   | 4.2                               |
| 92–93.....        | 0.173986  | 17,763                            | 3,091   | 16,218  | 69,164   | 3.9                               |
| 93–94.....        | 0.191788  | 14,673                            | 2,814   | 13,266  | 52,946   | 3.6                               |
| 94–95.....        | 0.210633  | 11,859                            | 2,498   | 10,610  | 39,680   | 3.3                               |
| 95–96.....        | 0.230432  | 9,361                             | 2,157   | 8,282   | 29,071   | 3.1                               |
| 96–97.....        | 0.251066  | 7,204                             | 1,809   | 6,300   | 20,788   | 2.9                               |
| 97–98.....        | 0.272395  | 5,395                             | 1,470   | 4,660   | 14,489   | 2.7                               |
| 98–99.....        | 0.294253  | 3,926                             | 1,155   | 3,348   | 9,828  | 2.5                               |
| 99–100.....       | 0.316456  | 2,770                             | 877   | 2,332   | 6,480  | 2.3                               |
| 100 and over..... | 1.000000  | 1,894                             | 1,894   | 4,148   | 4,148  | 2.2                               |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 2. Life table for males: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table02.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table02.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.006302  | 100,000                     | 630                                       | 99,449  | 7,610,075  | 76.1                           |
| 1-2.....    | 0.000423  | 99,370                      | 42  | 99,349  | 7,510,627  | 75.6                           |
| 2-3.....    | 0.000287  | 99,328                      | 29  | 99,313  | 7,411,278  | 74.6                           |
| 3-4.....    | 0.000225  | 99,299                      | 22  | 99,288  | 7,311,964  | 73.6                           |
| 4-5.....    | 0.000158  | 99,277                      | 16  | 99,269  | 7,212,676  | 72.7                           |
| 5-6.....    | 0.000156  | 99,261                      | 15  | 99,253  | 7,113,407  | 71.7                           |
| 6-7.....    | 0.000138  | 99,246                      | 14  | 99,239  | 7,014,154  | 70.7                           |
| 7-8.....    | 0.000124  | 99,232                      | 12  | 99,226  | 6,914,915  | 69.7                           |
| 8-9.....    | 0.000110  | 99,220                      | 11  | 99,214  | 6,815,689  | 68.7                           |
| 9-10.....   | 0.000098  | 99,209                      | 10  | 99,204  | 6,716,475  | 67.7                           |
| 10-11.....  | 0.000094  | 99,199                      | 9   | 99,194  | 6,617,271  | 66.7                           |
| 11-12.....  | 0.000108  | 99,190                      | 11  | 99,184  | 6,518,077  | 65.7                           |
| 12-13.....  | 0.000152  | 99,179                      | 15  | 99,171  | 6,418,893  | 64.7                           |
| 13-14.....  | 0.000232  | 99,164                      | 23  | 99,152  | 6,319,721  | 63.7                           |
| 14-15.....  | 0.000341  | 99,141                      | 34  | 99,124  | 6,220,569  | 62.7                           |
| 15-16.....  | 0.000461  | 99,107                      | 46  | 99,084  | 6,121,445  | 61.8                           |
| 16-17.....  | 0.000584  | 99,061                      | 58  | 99,032  | 6,022,360  | 60.8                           |
| 17-18.....  | 0.000718  | 99,003                      | 71  | 98,968  | 5,923,328  | 59.8                           |
| 18-19.....  | 0.000859  | 98,932                      | 85  | 98,890  | 5,824,360  | 58.9                           |
| 19-20.....  | 0.001001  | 98,848                      | 99  | 98,798  | 5,725,470  | 57.9                           |
| 20-21.....  | 0.001147  | 98,749                      | 113                                       | 98,692  | 5,626,672  | 57.0                           |
| 21-22.....  | 0.001286  | 98,635                      | 127                                       | 98,572  | 5,527,980  | 56.0                           |
| 22-23.....  | 0.001403  | 98,508                      | 138                                       | 98,439  | 5,429,408  | 55.1                           |
| 23-24.....  | 0.001490  | 98,370                      | 147                                       | 98,297  | 5,330,969  | 54.2                           |
| 24-25.....  | 0.001554  | 98,224                      | 153                                       | 98,147  | 5,232,672  | 53.3                           |
| 25-26.....  | 0.001609  | 98,071                      | 158                                       | 97,992  | 5,134,525  | 52.4                           |
| 26-27.....  | 0.001664  | 97,913                      | 163                                       | 97,832  | 5,036,533  | 51.4                           |
| 27-28.....  | 0.001713  | 97,750                      | 167                                       | 97,667  | 4,938,701  | 50.5                           |
| 28-29.....  | 0.001762  | 97,583                      | 172                                       | 97,497  | 4,841,034  | 49.6                           |
| 29-30.....  | 0.001810  | 97,411                      | 176                                       | 97,323  | 4,743,537  | 48.7                           |
| 30-31.....  | 0.001859  | 97,235                      | 181                                       | 97,144  | 4,646,215  | 47.8                           |
| 31-32.....  | 0.001907  | 97,054                      | 185                                       | 96,961  | 4,549,070  | 46.9                           |
| 32-33.....  | 0.001959  | 96,869                      | 190                                       | 96,774  | 4,452,109  | 46.0                           |
| 33-34.....  | 0.002014  | 96,679                      | 195                                       | 96,582  | 4,355,335  | 45.0                           |
| 34-35.....  | 0.002072  | 96,484                      | 200                                       | 96,384  | 4,258,754  | 44.1                           |
| 35-36.....  | 0.002139  | 96,284                      | 206                                       | 96,181  | 4,162,369  | 43.2                           |
| 36-37.....  | 0.002211  | 96,078                      | 212                                       | 95,972  | 4,066,188  | 42.3                           |
| 37-38.....  | 0.002277  | 95,866                      | 218                                       | 95,757  | 3,970,216  | 41.4                           |
| 38-39.....  | 0.002333  | 95,648                      | 223                                       | 95,536  | 3,874,459  | 40.5                           |
| 39-40.....  | 0.002390  | 95,425                      | 228                                       | 95,311  | 3,778,923  | 39.6                           |
| 40-41.....  | 0.002463  | 95,196                      | 234                                       | 95,079  | 3,683,612  | 38.7                           |
| 41-42.....  | 0.002566  | 94,962                      | 244                                       | 94,840  | 3,588,533  | 37.8                           |
| 42-43.....  | 0.002701  | 94,718                      | 256                                       | 94,591  | 3,493,693  | 36.9                           |
| 43-44.....  | 0.002870  | 94,463                      | 271                                       | 94,327  | 3,399,102  | 36.0                           |
| 44-45.....  | 0.003066  | 94,192                      | 289                                       | 94,047  | 3,304,775  | 35.1                           |
| 45-46.....  | 0.003280  | 93,903                      | 308                                       | 93,749  | 3,210,728  | 34.2                           |
| 46-47.....  | 0.003520  | 93,595                      | 329                                       | 93,430  | 3,116,979  | 33.3                           |
| 47-48.....  | 0.003804  | 93,265                      | 355                                       | 93,088  | 3,023,549  | 32.4                           |
| 48-49.....  | 0.004146  | 92,910                      | 385                                       | 92,718  | 2,930,462  | 31.5                           |
| 49-50.....  | 0.004547  | 92,525                      | 421                                       | 92,315  | 2,837,744  | 30.7                           |
| 50-51.....  | 0.004978  | 92,105                      | 459                                       | 91,875  | 2,745,429  | 29.8                           |
| 51-52.....  | 0.005441  | 91,646                      | 499                                       | 91,397  | 2,653,554  | 29.0                           |
| 52-53.....  | 0.005965  | 91,147                      | 544                                       | 90,876  | 2,562,157  | 28.1                           |
| 53-54.....  | 0.006549  | 90,604                      | 593                                       | 90,307  | 2,471,281  | 27.3                           |
| 54-55.....  | 0.007170  | 90,010                      | 645                                       | 89,688  | 2,380,974  | 26.5                           |
| 55-56.....  | 0.007803  | 89,365                      | 697                                       | 89,016  | 2,291,287  | 25.6                           |
| 56-57.....  | 0.008445  | 88,668                      | 749                                       | 88,293  | 2,202,270  | 24.8                           |
| 57-58.....  | 0.009116  | 87,919                      | 801                                       | 87,518  | 2,113,977  | 24.0                           |
| 58-59.....  | 0.009838  | 87,117                      | 857                                       | 86,689  | 2,026,459  | 23.3                           |
| 59-60.....  | 0.010619  | 86,260                      | 916                                       | 85,802  | 1,939,770  | 22.5                           |
| 60-61.....  | 0.011470  | 85,344                      | 979                                       | 84,855  | 1,853,967  | 21.7                           |

**Table 2. Life table for males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table02.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table02.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.012361  | 84,365                      | 1,043                                     | 83,844  | 1,769,113  | 21.0                           |
| 62–63.....        | 0.013260  | 83,323                      | 1,105                                     | 82,770  | 1,685,269  | 20.2                           |
| 63–64.....        | 0.014140  | 82,218                      | 1,163                                     | 81,636  | 1,602,498  | 19.5                           |
| 64–65.....        | 0.015019  | 81,055                      | 1,217                                     | 80,446  | 1,520,862  | 18.8                           |
| 65–66.....        | 0.015942  | 79,838                      | 1,273                                     | 79,201  | 1,440,416  | 18.0                           |
| 66–67.....        | 0.017026  | 78,565                      | 1,338                                     | 77,896  | 1,361,214  | 17.3                           |
| 67–68.....        | 0.018189  | 77,227                      | 1,405                                     | 76,525  | 1,283,318  | 16.6                           |
| 68–69.....        | 0.019483  | 75,823                      | 1,477                                     | 75,084  | 1,206,793  | 15.9                           |
| 69–70.....        | 0.020990  | 74,345                      | 1,561                                     | 73,565  | 1,131,709  | 15.2                           |
| 70–71.....        | 0.022448  | 72,785                      | 1,634                                     | 71,968  | 1,058,144  | 14.5                           |
| 71–72.....        | 0.024631  | 71,151                      | 1,753                                     | 70,275  | 986,176  | 13.9                           |
| 72–73.....        | 0.026570  | 69,399                      | 1,844                                     | 68,477  | 915,901  | 13.2                           |
| 73–74.....        | 0.029040  | 67,555                      | 1,962                                     | 66,574  | 847,424  | 12.5                           |
| 74–75.....        | 0.031539  | 65,593                      | 2,069                                     | 64,558  | 780,851  | 11.9                           |
| 75–76.....        | 0.034644  | 63,524                      | 2,201                                     | 62,424  | 716,292  | 11.3                           |
| 76–77.....        | 0.038148  | 61,323                      | 2,339                                     | 60,154  | 653,869  | 10.7                           |
| 77–78.....        | 0.042250  | 58,984                      | 2,492                                     | 57,738  | 593,715  | 10.1                           |
| 78–79.....        | 0.046522  | 56,492                      | 2,628                                     | 55,178  | 535,977  | 9.5                            |
| 79–80.....        | 0.051401  | 53,864                      | 2,769                                     | 52,479  | 480,799  | 8.9                            |
| 80–81.....        | 0.056783  | 51,095                      | 2,901                                     | 49,644  | 428,320  | 8.4                            |
| 81–82.....        | 0.062514  | 48,194                      | 3,013                                     | 46,687  | 378,675  | 7.9                            |
| 82–83.....        | 0.069452  | 45,181                      | 3,138                                     | 43,612  | 331,988  | 7.3                            |
| 83–84.....        | 0.077622  | 42,043                      | 3,263                                     | 40,411  | 288,376  | 6.9                            |
| 84–85.....        | 0.086155  | 38,780                      | 3,341                                     | 37,109  | 247,965  | 6.4                            |
| 85–86.....        | 0.095450  | 35,439                      | 3,383                                     | 33,747  | 210,855  | 5.9                            |
| 86–87.....        | 0.105788  | 32,056                      | 3,391                                     | 30,360  | 177,108  | 5.5                            |
| 87–88.....        | 0.118527  | 28,665                      | 3,398                                     | 26,966  | 146,748  | 5.1                            |
| 88–89.....        | 0.132437  | 25,267                      | 3,346                                     | 23,594  | 119,782  | 4.7                            |
| 89–90.....        | 0.147541  | 21,921                      | 3,234                                     | 20,304  | 96,188   | 4.4                            |
| 90–91.....        | 0.163839  | 18,687                      | 3,062                                     | 17,156  | 75,884   | 4.1                            |
| 91–92.....        | 0.181308  | 15,625                      | 2,833                                     | 14,209  | 58,728   | 3.8                            |
| 92–93.....        | 0.199900  | 12,792                      | 2,557                                     | 11,514  | 44,519   | 3.5                            |
| 93–94.....        | 0.219535  | 10,235                      | 2,247                                     | 9,112   | 33,006   | 3.2                            |
| 94–95.....        | 0.240108  | 7,988                       | 1,918                                     | 7,029   | 23,894   | 3.0                            |
| 95–96.....        | 0.261480  | 6,070                       | 1,587                                     | 5,276   | 16,865   | 2.8                            |
| 96–97.....        | 0.283491  | 4,483                       | 1,271                                     | 3,847   | 11,589   | 2.6                            |
| 97–98.....        | 0.305955  | 3,212                       | 983                                       | 2,721   | 7,741  | 2.4                            |
| 98–99.....        | 0.328673  | 2,229                       | 733                                       | 1,863   | 5,021  | 2.3                            |
| 99–100.....       | 0.351434  | 1,497                       | 526                                       | 1,234   | 3,158  | 2.1                            |
| 100 and over..... | 1.000000  | 971                         | 971                                       | 1,924   | 1,924  | 2.0                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 3. Life table for females: United States, 2017**

Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table03.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table03.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.005226  | 100,000                     | 523                                       | 99,541  | 8,110,475  | 81.1                           |
| 1-2.....    | 0.000339  | 99,477                      | 34  | 99,461  | 8,010,934  | 80.5                           |
| 2-3.....    | 0.000208  | 99,444                      | 21  | 99,433  | 7,911,474  | 79.6                           |
| 3-4.....    | 0.000159  | 99,423                      | 16  | 99,415  | 7,812,040  | 78.6                           |
| 4-5.....    | 0.000139  | 99,407                      | 14  | 99,400  | 7,712,625  | 77.6                           |
| 5-6.....    | 0.000126  | 99,393                      | 12  | 99,387  | 7,613,225  | 76.6                           |
| 6-7.....    | 0.000113  | 99,381                      | 11  | 99,375  | 7,513,838  | 75.6                           |
| 7-8.....    | 0.000104  | 99,370                      | 10  | 99,365  | 7,414,463  | 74.6                           |
| 8-9.....    | 0.000097  | 99,359                      | 10  | 99,355  | 7,315,098  | 73.6                           |
| 9-10.....   | 0.000092  | 99,350                      | 9   | 99,345  | 7,215,744  | 72.6                           |
| 10-11.....  | 0.000092  | 99,341                      | 9   | 99,336  | 7,116,398  | 71.6                           |
| 11-12.....  | 0.000098  | 99,331                      | 10  | 99,327  | 7,017,062  | 70.6                           |
| 12-13.....  | 0.000113  | 99,322                      | 11  | 99,316  | 6,917,736  | 69.6                           |
| 13-14.....  | 0.000138  | 99,311                      | 14  | 99,304  | 6,818,420  | 68.7                           |
| 14-15.....  | 0.000172  | 99,297                      | 17  | 99,288  | 6,719,116  | 67.7                           |
| 15-16.....  | 0.000210  | 99,280                      | 21  | 99,269  | 6,619,828  | 66.7                           |
| 16-17.....  | 0.000250  | 99,259                      | 25  | 99,247  | 6,520,559  | 65.7                           |
| 17-18.....  | 0.000293  | 99,234                      | 29  | 99,220  | 6,421,312  | 64.7                           |
| 18-19.....  | 0.000336  | 99,205                      | 33  | 99,188  | 6,322,092  | 63.7                           |
| 19-20.....  | 0.000379  | 99,172                      | 38  | 99,153  | 6,222,904  | 62.7                           |
| 20-21.....  | 0.000424  | 99,134                      | 42  | 99,113  | 6,123,751  | 61.8                           |
| 21-22.....  | 0.000471  | 99,092                      | 47  | 99,069  | 6,024,638  | 60.8                           |
| 22-23.....  | 0.000513  | 99,045                      | 51  | 99,020  | 5,925,569  | 59.8                           |
| 23-24.....  | 0.000550  | 98,995                      | 54  | 98,967  | 5,826,549  | 58.9                           |
| 24-25.....  | 0.000583  | 98,940                      | 58  | 98,911  | 5,727,582  | 57.9                           |
| 25-26.....  | 0.000613  | 98,883                      | 61  | 98,852  | 5,628,670  | 56.9                           |
| 26-27.....  | 0.000646  | 98,822                      | 64  | 98,790  | 5,529,818  | 56.0                           |
| 27-28.....  | 0.000682  | 98,758                      | 67  | 98,724  | 5,431,028  | 55.0                           |
| 28-29.....  | 0.000724  | 98,691                      | 72  | 98,655  | 5,332,304  | 54.0                           |
| 29-30.....  | 0.000774  | 98,619                      | 76  | 98,581  | 5,233,649  | 53.1                           |
| 30-31.....  | 0.000828  | 98,543                      | 82  | 98,502  | 5,135,068  | 52.1                           |
| 31-32.....  | 0.000885  | 98,461                      | 87  | 98,418  | 5,036,566  | 51.2                           |
| 32-33.....  | 0.000940  | 98,374                      | 92  | 98,328  | 4,938,148  | 50.2                           |
| 33-34.....  | 0.000989  | 98,282                      | 97  | 98,233  | 4,839,820  | 49.2                           |
| 34-35.....  | 0.001036  | 98,185                      | 102                                       | 98,134  | 4,741,587  | 48.3                           |
| 35-36.....  | 0.001087  | 98,083                      | 107                                       | 98,030  | 4,643,453  | 47.3                           |
| 36-37.....  | 0.001144  | 97,976                      | 112                                       | 97,920  | 4,545,423  | 46.4                           |
| 37-38.....  | 0.001203  | 97,864                      | 118                                       | 97,805  | 4,447,503  | 45.4                           |
| 38-39.....  | 0.001264  | 97,746                      | 124                                       | 97,685  | 4,349,698  | 44.5                           |
| 39-40.....  | 0.001332  | 97,623                      | 130                                       | 97,558  | 4,252,013  | 43.6                           |
| 40-41.....  | 0.001414  | 97,493                      | 138                                       | 97,424  | 4,154,455  | 42.6                           |
| 41-42.....  | 0.001513  | 97,355                      | 147                                       | 97,281  | 4,057,031  | 41.7                           |
| 42-43.....  | 0.001626  | 97,208                      | 158                                       | 97,129  | 3,959,750  | 40.7                           |
| 43-44.....  | 0.001750  | 97,050                      | 170                                       | 96,965  | 3,862,621  | 39.8                           |
| 44-45.....  | 0.001883  | 96,880                      | 182                                       | 96,788  | 3,765,657  | 38.9                           |
| 45-46.....  | 0.002025  | 96,697                      | 196                                       | 96,599  | 3,668,868  | 37.9                           |
| 46-47.....  | 0.002183  | 96,501                      | 211                                       | 96,396  | 3,572,269  | 37.0                           |
| 47-48.....  | 0.002366  | 96,291                      | 228                                       | 96,177  | 3,475,873  | 36.1                           |
| 48-49.....  | 0.002584  | 96,063                      | 248                                       | 95,939  | 3,379,696  | 35.2                           |
| 49-50.....  | 0.002836  | 95,815                      | 272                                       | 95,679  | 3,283,757  | 34.3                           |
| 50-51.....  | 0.003105  | 95,543                      | 297                                       | 95,395  | 3,188,078  | 33.4                           |
| 51-52.....  | 0.003391  | 95,246                      | 323                                       | 95,085  | 3,092,683  | 32.5                           |
| 52-53.....  | 0.003711  | 94,923                      | 352                                       | 94,747  | 2,997,598  | 31.6                           |
| 53-54.....  | 0.004066  | 94,571                      | 385                                       | 94,379  | 2,902,851  | 30.7                           |
| 54-55.....  | 0.004441  | 94,187                      | 418                                       | 93,977  | 2,808,472  | 29.8                           |
| 55-56.....  | 0.004829  | 93,768                      | 453                                       | 93,542  | 2,714,495  | 28.9                           |
| 56-57.....  | 0.005221  | 93,315                      | 487                                       | 93,072  | 2,620,953  | 28.1                           |
| 57-58.....  | 0.005613  | 92,828                      | 521                                       | 92,568  | 2,527,881  | 27.2                           |
| 58-59.....  | 0.006011  | 92,307                      | 555                                       | 92,030  | 2,435,313  | 26.4                           |
| 59-60.....  | 0.006429  | 91,752                      | 590                                       | 91,457  | 2,343,284  | 25.5                           |
| 60-61.....  | 0.006880  | 91,162                      | 627                                       | 90,849  | 2,251,826  | 24.7                           |

**Table 3. Life table for females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table03.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table03.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.007371  | 90,535                      | 667                                       | 90,202  | 2,160,977  | 23.9                           |
| 62–63.....        | 0.007903  | 89,868                      | 710                                       | 89,513  | 2,070,776  | 23.0                           |
| 63–64.....        | 0.008481  | 89,158                      | 756                                       | 88,780  | 1,981,263  | 22.2                           |
| 64–65.....        | 0.009111  | 88,401                      | 805                                       | 87,999  | 1,892,484  | 21.4                           |
| 65–66.....        | 0.009793  | 87,596                      | 858                                       | 87,167  | 1,804,485  | 20.6                           |
| 66–67.....        | 0.010568  | 86,738                      | 917                                       | 86,280  | 1,717,318  | 19.8                           |
| 67–68.....        | 0.011436  | 85,822                      | 981                                       | 85,331  | 1,631,038  | 19.0                           |
| 68–69.....        | 0.012474  | 84,840                      | 1,058                                     | 84,311  | 1,545,707  | 18.2                           |
| 69–70.....        | 0.013659  | 83,782                      | 1,144                                     | 83,210  | 1,461,396  | 17.4                           |
| 70–71.....        | 0.014881  | 82,637                      | 1,230                                     | 82,023  | 1,378,187  | 16.7                           |
| 71–72.....        | 0.016529  | 81,408                      | 1,346                                     | 80,735  | 1,296,164  | 15.9                           |
| 72–73.....        | 0.018210  | 80,062                      | 1,458                                     | 79,333  | 1,215,429  | 15.2                           |
| 73–74.....        | 0.020011  | 78,604                      | 1,573                                     | 77,818  | 1,136,096  | 14.5                           |
| 74–75.....        | 0.021903  | 77,031                      | 1,687                                     | 76,188  | 1,058,278  | 13.7                           |
| 75–76.....        | 0.024322  | 75,344                      | 1,833                                     | 74,428  | 982,091  | 13.0                           |
| 76–77.....        | 0.026899  | 73,511                      | 1,977                                     | 72,523  | 907,663  | 12.3                           |
| 77–78.....        | 0.029886  | 71,534                      | 2,138                                     | 70,465  | 835,141  | 11.7                           |
| 78–79.....        | 0.033413  | 69,396                      | 2,319                                     | 68,237  | 764,675  | 11.0                           |
| 79–80.....        | 0.037065  | 67,078                      | 2,486                                     | 65,834  | 696,439  | 10.4                           |
| 80–81.....        | 0.041478  | 64,591                      | 2,679                                     | 63,252  | 630,604  | 9.8                            |
| 81–82.....        | 0.046150  | 61,912                      | 2,857                                     | 60,484  | 567,352  | 9.2                            |
| 82–83.....        | 0.051681  | 59,055                      | 3,052                                     | 57,529  | 506,869  | 8.6                            |
| 83–84.....        | 0.058587  | 56,003                      | 3,281                                     | 54,362  | 449,340  | 8.0                            |
| 84–85.....        | 0.065586  | 52,722                      | 3,458                                     | 50,993  | 394,978  | 7.5                            |
| 85–86.....        | 0.072855  | 49,264                      | 3,589                                     | 47,469  | 343,985  | 7.0                            |
| 86–87.....        | 0.081115  | 45,675                      | 3,705                                     | 43,822  | 296,515  | 6.5                            |
| 87–88.....        | 0.091618  | 41,970                      | 3,845                                     | 40,047  | 252,693  | 6.0                            |
| 88–89.....        | 0.103241  | 38,125                      | 3,936                                     | 36,157  | 212,645  | 5.6                            |
| 89–90.....        | 0.116041  | 34,189                      | 3,967                                     | 32,205  | 176,488  | 5.2                            |
| 90–91.....        | 0.130061  | 30,222                      | 3,931                                     | 28,256  | 144,283  | 4.8                            |
| 91–92.....        | 0.145329  | 26,291                      | 3,821                                     | 24,380  | 116,027  | 4.4                            |
| 92–93.....        | 0.161848  | 22,470                      | 3,637                                     | 20,652  | 91,647   | 4.1                            |
| 93–94.....        | 0.179598  | 18,833                      | 3,382                                     | 17,142  | 70,995   | 3.8                            |
| 94–95.....        | 0.198530  | 15,451                      | 3,067                                     | 13,917  | 53,853   | 3.5                            |
| 95–96.....        | 0.218561  | 12,383                      | 2,707                                     | 11,030  | 39,936   | 3.2                            |
| 96–97.....        | 0.239579  | 9,677                       | 2,318                                     | 8,518   | 28,906   | 3.0                            |
| 97–98.....        | 0.261439  | 7,359                       | 1,924                                     | 6,397   | 20,388   | 2.8                            |
| 98–99.....        | 0.283967  | 5,435                       | 1,543                                     | 4,663   | 13,991   | 2.6                            |
| 99–100.....       | 0.306967  | 3,891                       | 1,195                                     | 3,294   | 9,328  | 2.4                            |
| 100 and over..... | 1.000000  | 2,697                       | 2,697                                     | 6,034   | 6,034  | 2.2                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 4. Life table for the white population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table04.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table04.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.004835  | 100,000                     | 484                                       | 99,574  | 7,879,015  | 78.8                           |
| 1-2.....    | 0.000343  | 99,516                      | 34  | 99,499  | 7,779,442  | 78.2                           |
| 2-3.....    | 0.000228  | 99,482                      | 23  | 99,471  | 7,679,942  | 77.2                           |
| 3-4.....    | 0.000176  | 99,460                      | 17  | 99,451  | 7,580,471  | 76.2                           |
| 4-5.....    | 0.000132  | 99,442                      | 13  | 99,436  | 7,481,020  | 75.2                           |
| 5-6.....    | 0.000128  | 99,429                      | 13  | 99,423  | 7,381,585  | 74.2                           |
| 6-7.....    | 0.000114  | 99,416                      | 11  | 99,411  | 7,282,162  | 73.2                           |
| 7-8.....    | 0.000104  | 99,405                      | 10  | 99,400  | 7,182,751  | 72.3                           |
| 8-9.....    | 0.000095  | 99,395                      | 9   | 99,390  | 7,083,351  | 71.3                           |
| 9-10.....   | 0.000088  | 99,385                      | 9   | 99,381  | 6,983,961  | 70.3                           |
| 10-11.....  | 0.000087  | 99,377                      | 9   | 99,372  | 6,884,580  | 69.3                           |
| 11-12.....  | 0.000098  | 99,368                      | 10  | 99,363  | 6,785,208  | 68.3                           |
| 12-13.....  | 0.000126  | 99,358                      | 13  | 99,352  | 6,685,845  | 67.3                           |
| 13-14.....  | 0.000175  | 99,346                      | 17  | 99,337  | 6,586,493  | 66.3                           |
| 14-15.....  | 0.000241  | 99,328                      | 24  | 99,316  | 6,487,156  | 65.3                           |
| 15-16.....  | 0.000315  | 99,304                      | 31  | 99,289  | 6,387,840  | 64.3                           |
| 16-17.....  | 0.000391  | 99,273                      | 39  | 99,254  | 6,288,551  | 63.3                           |
| 17-18.....  | 0.000474  | 99,234                      | 47  | 99,211  | 6,189,297  | 62.4                           |
| 18-19.....  | 0.000564  | 99,187                      | 56  | 99,159  | 6,090,087  | 61.4                           |
| 19-20.....  | 0.000657  | 99,131                      | 65  | 99,099  | 5,990,928  | 60.4                           |
| 20-21.....  | 0.000753  | 99,066                      | 75  | 99,029  | 5,891,829  | 59.5                           |
| 21-22.....  | 0.000847  | 98,991                      | 84  | 98,950  | 5,792,800  | 58.5                           |
| 22-23.....  | 0.000930  | 98,908                      | 92  | 98,862  | 5,693,851  | 57.6                           |
| 23-24.....  | 0.000996  | 98,816                      | 98  | 98,766  | 5,594,989  | 56.6                           |
| 24-25.....  | 0.001050  | 98,717                      | 104                                       | 98,665  | 5,496,223  | 55.7                           |
| 25-26.....  | 0.001098  | 98,613                      | 108                                       | 98,559  | 5,397,557  | 54.7                           |
| 26-27.....  | 0.001147  | 98,505                      | 113                                       | 98,449  | 5,298,998  | 53.8                           |
| 27-28.....  | 0.001195  | 98,392                      | 118                                       | 98,334  | 5,200,549  | 52.9                           |
| 28-29.....  | 0.001245  | 98,275                      | 122                                       | 98,214  | 5,102,216  | 51.9                           |
| 29-30.....  | 0.001299  | 98,152                      | 127                                       | 98,089  | 5,004,002  | 51.0                           |
| 30-31.....  | 0.001355  | 98,025                      | 133                                       | 97,959  | 4,905,914  | 50.0                           |
| 31-32.....  | 0.001410  | 97,892                      | 138                                       | 97,823  | 4,807,955  | 49.1                           |
| 32-33.....  | 0.001463  | 97,754                      | 143                                       | 97,683  | 4,710,132  | 48.2                           |
| 33-34.....  | 0.001512  | 97,611                      | 148                                       | 97,537  | 4,612,449  | 47.3                           |
| 34-35.....  | 0.001557  | 97,464                      | 152                                       | 97,388  | 4,514,912  | 46.3                           |
| 35-36.....  | 0.001609  | 97,312                      | 157                                       | 97,233  | 4,417,525  | 45.4                           |
| 36-37.....  | 0.001667  | 97,155                      | 162                                       | 97,074  | 4,320,291  | 44.5                           |
| 37-38.....  | 0.001722  | 96,993                      | 167                                       | 96,910  | 4,223,217  | 43.5                           |
| 38-39.....  | 0.001775  | 96,826                      | 172                                       | 96,740  | 4,126,307  | 42.6                           |
| 39-40.....  | 0.001833  | 96,654                      | 177                                       | 96,566  | 4,029,567  | 41.7                           |
| 40-41.....  | 0.001906  | 96,477                      | 184                                       | 96,385  | 3,933,001  | 40.8                           |
| 41-42.....  | 0.002003  | 96,293                      | 193                                       | 96,197  | 3,836,616  | 39.8                           |
| 42-43.....  | 0.002123  | 96,100                      | 204                                       | 95,998  | 3,740,419  | 38.9                           |
| 43-44.....  | 0.002264  | 95,896                      | 217                                       | 95,788  | 3,644,421  | 38.0                           |
| 44-45.....  | 0.002423  | 95,679                      | 232                                       | 95,563  | 3,548,633  | 37.1                           |
| 45-46.....  | 0.002594  | 95,447                      | 248                                       | 95,323  | 3,453,070  | 36.2                           |
| 46-47.....  | 0.002787  | 95,200                      | 265                                       | 95,067  | 3,357,747  | 35.3                           |
| 47-48.....  | 0.003013  | 94,934                      | 286                                       | 94,791  | 3,262,680  | 34.4                           |
| 48-49.....  | 0.003286  | 94,648                      | 311                                       | 94,493  | 3,167,888  | 33.5                           |
| 49-50.....  | 0.003605  | 94,337                      | 340                                       | 94,167  | 3,073,395  | 32.6                           |
| 50-51.....  | 0.003946  | 93,997                      | 371                                       | 93,812  | 2,979,228  | 31.7                           |
| 51-52.....  | 0.004309  | 93,626                      | 403                                       | 93,425  | 2,885,416  | 30.8                           |
| 52-53.....  | 0.004717  | 93,223                      | 440                                       | 93,003  | 2,791,992  | 29.9                           |
| 53-54.....  | 0.005166  | 92,783                      | 479                                       | 92,544  | 2,698,989  | 29.1                           |
| 54-55.....  | 0.005640  | 92,304                      | 521                                       | 92,044  | 2,606,445  | 28.2                           |
| 55-56.....  | 0.006124  | 91,783                      | 562                                       | 91,502  | 2,514,402  | 27.4                           |
| 56-57.....  | 0.006613  | 91,221                      | 603                                       | 90,920  | 2,422,899  | 26.6                           |
| 57-58.....  | 0.007114  | 90,618                      | 645                                       | 90,296  | 2,331,980  | 25.7                           |
| 58-59.....  | 0.007640  | 89,973                      | 687                                       | 89,630  | 2,241,684  | 24.9                           |
| 59-60.....  | 0.008202  | 89,286                      | 732                                       | 88,920  | 2,152,055  | 24.1                           |
| 60-61.....  | 0.008815  | 88,554                      | 781                                       | 88,163  | 2,063,135  | 23.3                           |



**Table 4. Life table for the white population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table04.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table04.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.009470  | 87,773                      | 831                                       | 87,357  | 1,974,972  | 22.5                           |
| 62–63.....        | 0.010149  | 86,942                      | 882                                       | 86,501  | 1,887,615  | 21.7                           |
| 63–64.....        | 0.010844  | 86,059                      | 933                                       | 85,593  | 1,801,114  | 20.9                           |
| 64–65.....        | 0.011569  | 85,126                      | 985                                       | 84,634  | 1,715,521  | 20.2                           |
| 65–66.....        | 0.012336  | 84,141                      | 1,038                                     | 83,622  | 1,630,887  | 19.4                           |
| 66–67.....        | 0.013237  | 83,103                      | 1,100                                     | 82,553  | 1,547,265  | 18.6                           |
| 67–68.....        | 0.014258  | 82,003                      | 1,169                                     | 81,419  | 1,464,712  | 17.9                           |
| 68–69.....        | 0.015458  | 80,834                      | 1,250                                     | 80,209  | 1,383,293  | 17.1                           |
| 69–70.....        | 0.016875  | 79,585                      | 1,343                                     | 78,913  | 1,303,083  | 16.4                           |
| 70–71.....        | 0.018271  | 78,242                      | 1,430                                     | 77,527  | 1,224,170  | 15.6                           |
| 71–72.....        | 0.020244  | 76,812                      | 1,555                                     | 76,035  | 1,146,643  | 14.9                           |
| 72–73.....        | 0.022047  | 75,257                      | 1,659                                     | 74,427  | 1,070,609  | 14.2                           |
| 73–74.....        | 0.024143  | 73,598                      | 1,777                                     | 72,709  | 996,181  | 13.5                           |
| 74–75.....        | 0.026293  | 71,821                      | 1,888                                     | 70,877  | 923,472  | 12.9                           |
| 75–76.....        | 0.029041  | 69,933                      | 2,031                                     | 68,917  | 852,595  | 12.2                           |
| 76–77.....        | 0.032057  | 67,902                      | 2,177                                     | 66,813  | 783,678  | 11.5                           |
| 77–78.....        | 0.035546  | 65,725                      | 2,336                                     | 64,557  | 716,864  | 10.9                           |
| 78–79.....        | 0.039397  | 63,389                      | 2,497                                     | 62,140  | 652,307  | 10.3                           |
| 79–80.....        | 0.043588  | 60,891                      | 2,654                                     | 59,564  | 590,167  | 9.7                            |
| 80–81.....        | 0.048462  | 58,237                      | 2,822                                     | 56,826  | 530,603  | 9.1                            |
| 81–82.....        | 0.053604  | 55,415                      | 2,970                                     | 53,930  | 473,777  | 8.5                            |
| 82–83.....        | 0.059712  | 52,445                      | 3,132                                     | 50,879  | 419,847  | 8.0                            |
| 83–84.....        | 0.067186  | 49,313                      | 3,313                                     | 47,656  | 368,968  | 7.5                            |
| 84–85.....        | 0.074810  | 46,000                      | 3,441                                     | 44,279  | 321,312  | 7.0                            |
| 85–86.....        | 0.083033  | 42,559                      | 3,534                                     | 40,792  | 277,032  | 6.5                            |
| 86–87.....        | 0.091708  | 39,025                      | 3,579                                     | 37,235  | 236,241  | 6.1                            |
| 87–88.....        | 0.103100  | 35,446                      | 3,654                                     | 33,619  | 199,005  | 5.6                            |
| 88–89.....        | 0.115622  | 31,791                      | 3,676                                     | 29,954  | 165,387  | 5.2                            |
| 89–90.....        | 0.129315  | 28,116                      | 3,636                                     | 26,298  | 135,433  | 4.8                            |
| 90–91.....        | 0.144206  | 24,480                      | 3,530                                     | 22,715  | 109,135  | 4.5                            |
| 91–92.....        | 0.160301  | 20,950                      | 3,358                                     | 19,271  | 86,421   | 4.1                            |
| 92–93.....        | 0.177581  | 17,591                      | 3,124                                     | 16,030  | 67,150   | 3.8                            |
| 93–94.....        | 0.196002  | 14,468                      | 2,836                                     | 13,050  | 51,120   | 3.5                            |
| 94–95.....        | 0.215493  | 11,632                      | 2,507                                     | 10,379  | 38,071   | 3.3                            |
| 95–96.....        | 0.235950  | 9,125                       | 2,153                                     | 8,049   | 27,692   | 3.0                            |
| 96–97.....        | 0.257243  | 6,972                       | 1,794                                     | 6,075   | 19,643   | 2.8                            |
| 97–98.....        | 0.279210  | 5,179                       | 1,446                                     | 4,456   | 13,568   | 2.6                            |
| 98–99.....        | 0.301672  | 3,733                       | 1,126                                     | 3,170   | 9,112  | 2.4                            |
| 99–100.....       | 0.324428  | 2,607                       | 846                                       | 2,184   | 5,943  | 2.3                            |
| 100 and over..... | 1.000000  | 1,761                       | 1,761                                     | 3,759   | 3,759  | 2.1                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 5. Life table for white males: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table05.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table05.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.005273  | 100,000                     | 527                                       | 99,536  | 7,637,059  | 76.4                           |
| 1-2.....    | 0.000389  | 99,473                      | 39  | 99,453  | 7,537,523  | 75.8                           |
| 2-3.....    | 0.000273  | 99,434                      | 27  | 99,420  | 7,438,070  | 74.8                           |
| 3-4.....    | 0.000199  | 99,407                      | 20  | 99,397  | 7,338,650  | 73.8                           |
| 4-5.....    | 0.000147  | 99,387                      | 15  | 99,380  | 7,239,253  | 72.8                           |
| 5-6.....    | 0.000143  | 99,373                      | 14  | 99,365  | 7,139,873  | 71.8                           |
| 6-7.....    | 0.000126  | 99,358                      | 12  | 99,352  | 7,040,507  | 70.9                           |
| 7-8.....    | 0.000112  | 99,346                      | 11  | 99,340  | 6,941,155  | 69.9                           |
| 8-9.....    | 0.000100  | 99,335                      | 10  | 99,330  | 6,841,815  | 68.9                           |
| 9-10.....   | 0.000091  | 99,325                      | 9   | 99,320  | 6,742,485  | 67.9                           |
| 10-11.....  | 0.000090  | 99,316                      | 9   | 99,311  | 6,643,165  | 66.9                           |
| 11-12.....  | 0.000105  | 99,307                      | 10  | 99,302  | 6,543,853  | 65.9                           |
| 12-13.....  | 0.000145  | 99,296                      | 14  | 99,289  | 6,444,552  | 64.9                           |
| 13-14.....  | 0.000215  | 99,282                      | 21  | 99,271  | 6,345,263  | 63.9                           |
| 14-15.....  | 0.000309  | 99,261                      | 31  | 99,245  | 6,245,991  | 62.9                           |
| 15-16.....  | 0.000412  | 99,230                      | 41  | 99,209  | 6,146,746  | 61.9                           |
| 16-17.....  | 0.000520  | 99,189                      | 52  | 99,163  | 6,047,537  | 61.0                           |
| 17-18.....  | 0.000642  | 99,137                      | 64  | 99,106  | 5,948,373  | 60.0                           |
| 18-19.....  | 0.000778  | 99,074                      | 77  | 99,035  | 5,849,268  | 59.0                           |
| 19-20.....  | 0.000921  | 98,997                      | 91  | 98,951  | 5,750,233  | 58.1                           |
| 20-21.....  | 0.001068  | 98,906                      | 106                                       | 98,853  | 5,651,282  | 57.1                           |
| 21-22.....  | 0.001209  | 98,800                      | 119                                       | 98,740  | 5,552,429  | 56.2                           |
| 22-23.....  | 0.001330  | 98,680                      | 131                                       | 98,615  | 5,453,689  | 55.3                           |
| 23-24.....  | 0.001424  | 98,549                      | 140                                       | 98,479  | 5,355,074  | 54.3                           |
| 24-25.....  | 0.001497  | 98,409                      | 147                                       | 98,335  | 5,256,595  | 53.4                           |
| 25-26.....  | 0.001561  | 98,262                      | 153                                       | 98,185  | 5,158,260  | 52.5                           |
| 26-27.....  | 0.001624  | 98,108                      | 159                                       | 98,029  | 5,060,075  | 51.6                           |
| 27-28.....  | 0.001682  | 97,949                      | 165                                       | 97,866  | 4,962,046  | 50.7                           |
| 28-29.....  | 0.001737  | 97,784                      | 170                                       | 97,699  | 4,864,180  | 49.7                           |
| 29-30.....  | 0.001792  | 97,614                      | 175                                       | 97,527  | 4,766,481  | 48.8                           |
| 30-31.....  | 0.001847  | 97,439                      | 180                                       | 97,349  | 4,668,954  | 47.9                           |
| 31-32.....  | 0.001900  | 97,259                      | 185                                       | 97,167  | 4,571,605  | 47.0                           |
| 32-33.....  | 0.001952  | 97,075                      | 190                                       | 96,980  | 4,474,438  | 46.1                           |
| 33-34.....  | 0.002003  | 96,885                      | 194                                       | 96,788  | 4,377,458  | 45.2                           |
| 34-35.....  | 0.002053  | 96,691                      | 198                                       | 96,592  | 4,280,670  | 44.3                           |
| 35-36.....  | 0.002111  | 96,493                      | 204                                       | 96,391  | 4,184,078  | 43.4                           |
| 36-37.....  | 0.002174  | 96,289                      | 209                                       | 96,184  | 4,087,688  | 42.5                           |
| 37-38.....  | 0.002233  | 96,079                      | 215                                       | 95,972  | 3,991,503  | 41.5                           |
| 38-39.....  | 0.002285  | 95,865                      | 219                                       | 95,755  | 3,895,531  | 40.6                           |
| 39-40.....  | 0.002340  | 95,646                      | 224                                       | 95,534  | 3,799,776  | 39.7                           |
| 40-41.....  | 0.002413  | 95,422                      | 230                                       | 95,307  | 3,704,242  | 38.8                           |
| 41-42.....  | 0.002516  | 95,192                      | 239                                       | 95,072  | 3,608,935  | 37.9                           |
| 42-43.....  | 0.002649  | 94,952                      | 252                                       | 94,827  | 3,513,863  | 37.0                           |
| 43-44.....  | 0.002811  | 94,701                      | 266                                       | 94,568  | 3,419,036  | 36.1                           |
| 44-45.....  | 0.002999  | 94,435                      | 283                                       | 94,293  | 3,324,469  | 35.2                           |
| 45-46.....  | 0.003203  | 94,151                      | 302                                       | 94,001  | 3,230,176  | 34.3                           |
| 46-47.....  | 0.003433  | 93,850                      | 322                                       | 93,689  | 3,136,175  | 33.4                           |
| 47-48.....  | 0.003709  | 93,528                      | 347                                       | 93,354  | 3,042,486  | 32.5                           |
| 48-49.....  | 0.004047  | 93,181                      | 377                                       | 92,992  | 2,949,132  | 31.6                           |
| 49-50.....  | 0.004445  | 92,804                      | 413                                       | 92,597  | 2,856,140  | 30.8                           |
| 50-51.....  | 0.004874  | 92,391                      | 450                                       | 92,166  | 2,763,542  | 29.9                           |
| 51-52.....  | 0.005331  | 91,941                      | 490                                       | 91,696  | 2,671,377  | 29.1                           |
| 52-53.....  | 0.005844  | 91,451                      | 534                                       | 91,183  | 2,579,681  | 28.2                           |
| 53-54.....  | 0.006408  | 90,916                      | 583                                       | 90,625  | 2,488,497  | 27.4                           |
| 54-55.....  | 0.007003  | 90,334                      | 633                                       | 90,017  | 2,397,873  | 26.5                           |
| 55-56.....  | 0.007607  | 89,701                      | 682                                       | 89,360  | 2,307,855  | 25.7                           |
| 56-57.....  | 0.008219  | 89,018                      | 732                                       | 88,653  | 2,218,496  | 24.9                           |
| 57-58.....  | 0.008857  | 88,287                      | 782                                       | 87,896  | 2,129,843  | 24.1                           |
| 58-59.....  | 0.009542  | 87,505                      | 835                                       | 87,087  | 2,041,947  | 23.3                           |
| 59-60.....  | 0.010285  | 86,670                      | 891                                       | 86,224  | 1,954,860  | 22.6                           |
| 60-61.....  | 0.011098  | 85,778                      | 952                                       | 85,303  | 1,868,635  | 21.8                           |

**Table 5. Life table for white males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table05.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table05.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.011952  | 84,827                      | 1,014                                     | 84,320  | 1,783,333  | 21.0                           |
| 62–63.....        | 0.012814  | 83,813                      | 1,074                                     | 83,276  | 1,699,013  | 20.3                           |
| 63–64.....        | 0.013657  | 82,739                      | 1,130                                     | 82,174  | 1,615,738  | 19.5                           |
| 64–65.....        | 0.014502  | 81,609                      | 1,183                                     | 81,017  | 1,533,564  | 18.8                           |
| 65–66.....        | 0.015384  | 80,425                      | 1,237                                     | 79,807  | 1,452,547  | 18.1                           |
| 66–67.....        | 0.016444  | 79,188                      | 1,302                                     | 78,537  | 1,372,741  | 17.3                           |
| 67–68.....        | 0.017624  | 77,886                      | 1,373                                     | 77,199  | 1,294,204  | 16.6                           |
| 68–69.....        | 0.018968  | 76,513                      | 1,451                                     | 75,788  | 1,217,004  | 15.9                           |
| 69–70.....        | 0.020586  | 75,062                      | 1,545                                     | 74,289  | 1,141,217  | 15.2                           |
| 70–71.....        | 0.022109  | 73,517                      | 1,625                                     | 72,704  | 1,066,927  | 14.5                           |
| 71–72.....        | 0.024359  | 71,891                      | 1,751                                     | 71,016  | 994,223  | 13.8                           |
| 72–73.....        | 0.026347  | 70,140                      | 1,848                                     | 69,216  | 923,208  | 13.2                           |
| 73–74.....        | 0.028810  | 68,292                      | 1,967                                     | 67,308  | 853,992  | 12.5                           |
| 74–75.....        | 0.031309  | 66,325                      | 2,077                                     | 65,286  | 786,683  | 11.9                           |
| 75–76.....        | 0.034486  | 64,248                      | 2,216                                     | 63,140  | 721,397  | 11.2                           |
| 76–77.....        | 0.038026  | 62,032                      | 2,359                                     | 60,853  | 658,257  | 10.6                           |
| 77–78.....        | 0.042286  | 59,674                      | 2,523                                     | 58,412  | 597,404  | 10.0                           |
| 78–79.....        | 0.046547  | 57,150                      | 2,660                                     | 55,820  | 538,992  | 9.4                            |
| 79–80.....        | 0.051534  | 54,490                      | 2,808                                     | 53,086  | 483,172  | 8.9                            |
| 80–81.....        | 0.057008  | 51,682                      | 2,946                                     | 50,209  | 430,086  | 8.3                            |
| 81–82.....        | 0.062923  | 48,736                      | 3,067                                     | 47,202  | 379,877  | 7.8                            |
| 82–83.....        | 0.069911  | 45,669                      | 3,193                                     | 44,073  | 332,675  | 7.3                            |
| 83–84.....        | 0.078099  | 42,476                      | 3,317                                     | 40,818  | 288,602  | 6.8                            |
| 84–85.....        | 0.086754  | 39,159                      | 3,397                                     | 37,460  | 247,784  | 6.3                            |
| 85–86.....        | 0.096549  | 35,762                      | 3,453                                     | 34,035  | 210,324  | 5.9                            |
| 86–87.....        | 0.106472  | 32,309                      | 3,440                                     | 30,589  | 176,289  | 5.5                            |
| 87–88.....        | 0.119677  | 28,869                      | 3,455                                     | 27,141  | 145,700  | 5.0                            |
| 88–89.....        | 0.134128  | 25,414                      | 3,409                                     | 23,710  | 118,558  | 4.7                            |
| 89–90.....        | 0.149846  | 22,005                      | 3,297                                     | 20,357  | 94,849   | 4.3                            |
| 90–91.....        | 0.166829  | 18,708                      | 3,121                                     | 17,147  | 74,492   | 4.0                            |
| 91–92.....        | 0.185047  | 15,587                      | 2,884                                     | 14,145  | 57,345   | 3.7                            |
| 92–93.....        | 0.204441  | 12,703                      | 2,597                                     | 11,404  | 43,200   | 3.4                            |
| 93–94.....        | 0.224919  | 10,106                      | 2,273                                     | 8,969   | 31,796   | 3.1                            |
| 94–95.....        | 0.246354  | 7,833                       | 1,930                                     | 6,868   | 22,827   | 2.9                            |
| 95–96.....        | 0.268590  | 5,903                       | 1,586                                     | 5,110   | 15,959   | 2.7                            |
| 96–97.....        | 0.291442  | 4,318                       | 1,258                                     | 3,688   | 10,849   | 2.5                            |
| 97–98.....        | 0.314700  | 3,059                       | 963                                       | 2,578   | 7,160  | 2.3                            |
| 98–99.....        | 0.338142  | 2,096                       | 709                                       | 1,742   | 4,582  | 2.2                            |
| 99–100.....       | 0.361537  | 1,388                       | 502                                       | 1,137   | 2,840  | 2.0                            |
| 100 and over..... | 1.000000  | 886                         | 886                                       | 1,703   | 1,703  | 1.9                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 6. Life table for white females: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table06.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table06.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.004376  | 100,000                     | 438                                       | 99,613  | 8,123,536  | 81.2                           |
| 1-2.....    | 0.000296  | 99,562                      | 29  | 99,548  | 8,023,923  | 80.6                           |
| 2-3.....    | 0.000180  | 99,533                      | 18  | 99,524  | 7,924,375  | 79.6                           |
| 3-4.....    | 0.000151  | 99,515                      | 15  | 99,508  | 7,824,851  | 78.6                           |
| 4-5.....    | 0.000116  | 99,500                      | 11  | 99,494  | 7,725,344  | 77.6                           |
| 5-6.....    | 0.000112  | 99,489                      | 11  | 99,483  | 7,625,849  | 76.7                           |
| 6-7.....    | 0.000102  | 99,477                      | 10  | 99,472  | 7,526,366  | 75.7                           |
| 7-8.....    | 0.000095  | 99,467                      | 9   | 99,463  | 7,426,894  | 74.7                           |
| 8-9.....    | 0.000089  | 99,458                      | 9   | 99,453  | 7,327,432  | 73.7                           |
| 9-10.....   | 0.000085  | 99,449                      | 8   | 99,445  | 7,227,978  | 72.7                           |
| 10-11.....  | 0.000085  | 99,440                      | 8   | 99,436  | 7,128,534  | 71.7                           |
| 11-12.....  | 0.000090  | 99,432                      | 9   | 99,428  | 7,029,097  | 70.7                           |
| 12-13.....  | 0.000106  | 99,423                      | 11  | 99,418  | 6,929,670  | 69.7                           |
| 13-14.....  | 0.000134  | 99,413                      | 13  | 99,406  | 6,830,252  | 68.7                           |
| 14-15.....  | 0.000170  | 99,399                      | 17  | 99,391  | 6,730,846  | 67.7                           |
| 15-16.....  | 0.000212  | 99,382                      | 21  | 99,372  | 6,631,455  | 66.7                           |
| 16-17.....  | 0.000255  | 99,361                      | 25  | 99,349  | 6,532,084  | 65.7                           |
| 17-18.....  | 0.000298  | 99,336                      | 30  | 99,321  | 6,432,735  | 64.8                           |
| 18-19.....  | 0.000339  | 99,306                      | 34  | 99,289  | 6,333,414  | 63.8                           |
| 19-20.....  | 0.000379  | 99,273                      | 38  | 99,254  | 6,234,124  | 62.8                           |
| 20-21.....  | 0.000420  | 99,235                      | 42  | 99,214  | 6,134,871  | 61.8                           |
| 21-22.....  | 0.000464  | 99,193                      | 46  | 99,170  | 6,035,657  | 60.8                           |
| 22-23.....  | 0.000504  | 99,147                      | 50  | 99,122  | 5,936,486  | 59.9                           |
| 23-24.....  | 0.000542  | 99,097                      | 54  | 99,070  | 5,837,364  | 58.9                           |
| 24-25.....  | 0.000576  | 99,044                      | 57  | 99,015  | 5,738,294  | 57.9                           |
| 25-26.....  | 0.000609  | 98,987                      | 60  | 98,956  | 5,639,279  | 57.0                           |
| 26-27.....  | 0.000643  | 98,926                      | 64  | 98,894  | 5,540,322  | 56.0                           |
| 27-28.....  | 0.000682  | 98,863                      | 67  | 98,829  | 5,441,428  | 55.0                           |
| 28-29.....  | 0.000728  | 98,795                      | 72  | 98,759  | 5,342,599  | 54.1                           |
| 29-30.....  | 0.000781  | 98,723                      | 77  | 98,685  | 5,243,840  | 53.1                           |
| 30-31.....  | 0.000839  | 98,646                      | 83  | 98,605  | 5,145,155  | 52.2                           |
| 31-32.....  | 0.000898  | 98,564                      | 88  | 98,519  | 5,046,550  | 51.2                           |
| 32-33.....  | 0.000953  | 98,475                      | 94  | 98,428  | 4,948,031  | 50.2                           |
| 33-34.....  | 0.001000  | 98,381                      | 98  | 98,332  | 4,849,602  | 49.3                           |
| 34-35.....  | 0.001043  | 98,283                      | 102                                       | 98,232  | 4,751,270  | 48.3                           |
| 35-36.....  | 0.001089  | 98,180                      | 107                                       | 98,127  | 4,653,039  | 47.4                           |
| 36-37.....  | 0.001143  | 98,073                      | 112                                       | 98,017  | 4,554,912  | 46.4                           |
| 37-38.....  | 0.001197  | 97,961                      | 117                                       | 97,903  | 4,456,895  | 45.5                           |
| 38-39.....  | 0.001252  | 97,844                      | 122                                       | 97,783  | 4,358,992  | 44.6                           |
| 39-40.....  | 0.001313  | 97,722                      | 128                                       | 97,657  | 4,261,209  | 43.6                           |
| 40-41.....  | 0.001388  | 97,593                      | 135                                       | 97,526  | 4,163,551  | 42.7                           |
| 41-42.....  | 0.001480  | 97,458                      | 144                                       | 97,386  | 4,066,026  | 41.7                           |
| 42-43.....  | 0.001589  | 97,314                      | 155                                       | 97,236  | 3,968,640  | 40.8                           |
| 43-44.....  | 0.001709  | 97,159                      | 166                                       | 97,076  | 3,871,404  | 39.8                           |
| 44-45.....  | 0.001840  | 96,993                      | 178                                       | 96,904  | 3,774,328  | 38.9                           |
| 45-46.....  | 0.001979  | 96,814                      | 192                                       | 96,719  | 3,677,425  | 38.0                           |
| 46-47.....  | 0.002133  | 96,623                      | 206                                       | 96,520  | 3,580,706  | 37.1                           |
| 47-48.....  | 0.002311  | 96,417                      | 223                                       | 96,305  | 3,484,186  | 36.1                           |
| 48-49.....  | 0.002520  | 96,194                      | 242                                       | 96,073  | 3,387,881  | 35.2                           |
| 49-50.....  | 0.002762  | 95,952                      | 265                                       | 95,819  | 3,291,808  | 34.3                           |
| 50-51.....  | 0.003018  | 95,687                      | 289                                       | 95,542  | 3,195,989  | 33.4                           |
| 51-52.....  | 0.003292  | 95,398                      | 314                                       | 95,241  | 3,100,447  | 32.5                           |
| 52-53.....  | 0.003600  | 95,084                      | 342                                       | 94,913  | 3,005,206  | 31.6                           |
| 53-54.....  | 0.003941  | 94,741                      | 373                                       | 94,555  | 2,910,294  | 30.7                           |
| 54-55.....  | 0.004301  | 94,368                      | 406                                       | 94,165  | 2,815,739  | 29.8                           |
| 55-56.....  | 0.004674  | 93,962                      | 439                                       | 93,743  | 2,721,574  | 29.0                           |
| 56-57.....  | 0.005050  | 93,523                      | 472                                       | 93,287  | 2,627,831  | 28.1                           |
| 57-58.....  | 0.005425  | 93,051                      | 505                                       | 92,798  | 2,534,544  | 27.2                           |
| 58-59.....  | 0.005806  | 92,546                      | 537                                       | 92,277  | 2,441,746  | 26.4                           |
| 59-60.....  | 0.006206  | 92,009                      | 571                                       | 91,723  | 2,349,468  | 25.5                           |
| 60-61.....  | 0.006644  | 91,438                      | 607                                       | 91,134  | 2,257,745  | 24.7                           |

**Table 6. Life table for white females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table06.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table06.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.007124  | 90,830                      | 647                                       | 90,507  | 2,166,611  | 23.9                           |
| 62–63.....        | 0.007647  | 90,183                      | 690                                       | 89,838  | 2,076,105  | 23.0                           |
| 63–64.....        | 0.008217  | 89,493                      | 735                                       | 89,126  | 1,986,266  | 22.2                           |
| 64–65.....        | 0.008842  | 88,758                      | 785                                       | 88,366  | 1,897,141  | 21.4                           |
| 65–66.....        | 0.009515  | 87,973                      | 837                                       | 87,555  | 1,808,775  | 20.6                           |
| 66–67.....        | 0.010293  | 87,136                      | 897                                       | 86,688  | 1,721,220  | 19.8                           |
| 67–68.....        | 0.011188  | 86,239                      | 965                                       | 85,757  | 1,634,532  | 19.0                           |
| 68–69.....        | 0.012280  | 85,275                      | 1,047                                     | 84,751  | 1,548,775  | 18.2                           |
| 69–70.....        | 0.013537  | 84,227                      | 1,140                                     | 83,657  | 1,464,024  | 17.4                           |
| 70–71.....        | 0.014827  | 83,087                      | 1,232                                     | 82,471  | 1,380,367  | 16.6                           |
| 71–72.....        | 0.016570  | 81,855                      | 1,356                                     | 81,177  | 1,297,896  | 15.9                           |
| 72–73.....        | 0.018235  | 80,499                      | 1,468                                     | 79,765  | 1,216,719  | 15.1                           |
| 73–74.....        | 0.020046  | 79,031                      | 1,584                                     | 78,239  | 1,136,954  | 14.4                           |
| 74–75.....        | 0.021938  | 77,447                      | 1,699                                     | 76,597  | 1,058,715  | 13.7                           |
| 75–76.....        | 0.024382  | 75,748                      | 1,847                                     | 74,824  | 982,118  | 13.0                           |
| 76–77.....        | 0.027026  | 73,901                      | 1,997                                     | 72,902  | 907,293  | 12.3                           |
| 77–78.....        | 0.029965  | 71,904                      | 2,155                                     | 70,826  | 834,391  | 11.6                           |
| 78–79.....        | 0.033566  | 69,749                      | 2,341                                     | 68,578  | 763,565  | 10.9                           |
| 79–80.....        | 0.037224  | 67,408                      | 2,509                                     | 66,153  | 694,987  | 10.3                           |
| 80–81.....        | 0.041748  | 64,899                      | 2,709                                     | 63,544  | 628,833  | 9.7                            |
| 81–82.....        | 0.046426  | 62,189                      | 2,887                                     | 60,746  | 565,290  | 9.1                            |
| 82–83.....        | 0.052066  | 59,302                      | 3,088                                     | 57,758  | 504,544  | 8.5                            |
| 83–84.....        | 0.059213  | 56,214                      | 3,329                                     | 54,550  | 446,786  | 7.9                            |
| 84–85.....        | 0.066359  | 52,886                      | 3,509                                     | 51,131  | 392,236  | 7.4                            |
| 85–86.....        | 0.073798  | 49,376                      | 3,644                                     | 47,554  | 341,105  | 6.9                            |
| 86–87.....        | 0.081793  | 45,732                      | 3,741                                     | 43,862  | 293,550  | 6.4                            |
| 87–88.....        | 0.092586  | 41,992                      | 3,888                                     | 40,048  | 249,688  | 5.9                            |
| 88–89.....        | 0.104549  | 38,104                      | 3,984                                     | 36,112  | 209,640  | 5.5                            |
| 89–90.....        | 0.117741  | 34,120                      | 4,017                                     | 32,112  | 173,528  | 5.1                            |
| 90–91.....        | 0.132206  | 30,103                      | 3,980                                     | 28,113  | 141,417  | 4.7                            |
| 91–92.....        | 0.147969  | 26,123                      | 3,865                                     | 24,190  | 113,304  | 4.3                            |
| 92–93.....        | 0.165031  | 22,258                      | 3,673                                     | 20,421  | 89,114   | 4.0                            |
| 93–94.....        | 0.183365  | 18,584                      | 3,408                                     | 16,881  | 68,692   | 3.7                            |
| 94–95.....        | 0.202911  | 15,177                      | 3,080                                     | 13,637  | 51,812   | 3.4                            |
| 95–96.....        | 0.223578  | 12,097                      | 2,705                                     | 10,745  | 38,175   | 3.2                            |
| 96–97.....        | 0.245236  | 9,393                       | 2,303                                     | 8,241   | 27,430   | 2.9                            |
| 97–98.....        | 0.267725  | 7,089                       | 1,898                                     | 6,140   | 19,189   | 2.7                            |
| 98–99.....        | 0.290853  | 5,191                       | 1,510                                     | 4,436   | 13,049   | 2.5                            |
| 99–100.....       | 0.314404  | 3,681                       | 1,157                                     | 3,103   | 8,613  | 2.3                            |
| 100 and over..... | 1.000000  | 2,524                       | 2,524                                     | 5,510   | 5,510  | 2.2                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 7. Life table for the black population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table07.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table07.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.010796  | 100,000                     | 1,080                                     | 99,064  | 7,530,675  | 75.3                           |
| 1-2.....    | 0.000605  | 98,920                      | 60  | 98,890  | 7,431,612  | 75.1                           |
| 2-3.....    | 0.000381  | 98,861                      | 38  | 98,842  | 7,332,721  | 74.2                           |
| 3-4.....    | 0.000281  | 98,823                      | 28  | 98,809  | 7,233,879  | 73.2                           |
| 4-5.....    | 0.000240  | 98,795                      | 24  | 98,783  | 7,135,070  | 72.2                           |
| 5-6.....    | 0.000214  | 98,771                      | 21  | 98,761  | 7,036,287  | 71.2                           |
| 6-7.....    | 0.000191  | 98,750                      | 19  | 98,741  | 6,937,526  | 70.3                           |
| 7-8.....    | 0.000172  | 98,731                      | 17  | 98,723  | 6,838,786  | 69.3                           |
| 8-9.....    | 0.000154  | 98,714                      | 15  | 98,707  | 6,740,063  | 68.3                           |
| 9-10.....   | 0.000138  | 98,699                      | 14  | 98,692  | 6,641,356  | 67.3                           |
| 10-11.....  | 0.000129  | 98,686                      | 13  | 98,679  | 6,542,663  | 66.3                           |
| 11-12.....  | 0.000140  | 98,673                      | 14  | 98,666  | 6,443,984  | 65.3                           |
| 12-13.....  | 0.000183  | 98,659                      | 18  | 98,650  | 6,345,318  | 64.3                           |
| 13-14.....  | 0.000265  | 98,641                      | 26  | 98,628  | 6,246,668  | 63.3                           |
| 14-15.....  | 0.000376  | 98,615                      | 37  | 98,596  | 6,148,040  | 62.3                           |
| 15-16.....  | 0.000499  | 98,578                      | 49  | 98,553  | 6,049,444  | 61.4                           |
| 16-17.....  | 0.000621  | 98,529                      | 61  | 98,498  | 5,950,891  | 60.4                           |
| 17-18.....  | 0.000750  | 98,467                      | 74  | 98,430  | 5,852,393  | 59.4                           |
| 18-19.....  | 0.000879  | 98,394                      | 87  | 98,350  | 5,753,962  | 58.5                           |
| 19-20.....  | 0.001007  | 98,307                      | 99  | 98,258  | 5,655,612  | 57.5                           |
| 20-21.....  | 0.001134  | 98,208                      | 111                                       | 98,152  | 5,557,354  | 56.6                           |
| 21-22.....  | 0.001256  | 98,097                      | 123                                       | 98,035  | 5,459,202  | 55.7                           |
| 22-23.....  | 0.001358  | 97,973                      | 133                                       | 97,907  | 5,361,167  | 54.7                           |
| 23-24.....  | 0.001433  | 97,840                      | 140                                       | 97,770  | 5,263,260  | 53.8                           |
| 24-25.....  | 0.001488  | 97,700                      | 145                                       | 97,627  | 5,165,490  | 52.9                           |
| 25-26.....  | 0.001536  | 97,555                      | 150                                       | 97,480  | 5,067,862  | 51.9                           |
| 26-27.....  | 0.001583  | 97,405                      | 154                                       | 97,328  | 4,970,382  | 51.0                           |
| 27-28.....  | 0.001628  | 97,251                      | 158                                       | 97,172  | 4,873,055  | 50.1                           |
| 28-29.....  | 0.001672  | 97,092                      | 162                                       | 97,011  | 4,775,883  | 49.2                           |
| 29-30.....  | 0.001721  | 96,930                      | 167                                       | 96,847  | 4,678,872  | 48.3                           |
| 30-31.....  | 0.001774  | 96,763                      | 172                                       | 96,677  | 4,582,025  | 47.4                           |
| 31-32.....  | 0.001834  | 96,592                      | 177                                       | 96,503  | 4,485,348  | 46.4                           |
| 32-33.....  | 0.001908  | 96,414                      | 184                                       | 96,323  | 4,388,845  | 45.5                           |
| 33-34.....  | 0.001998  | 96,231                      | 192                                       | 96,134  | 4,292,522  | 44.6                           |
| 34-35.....  | 0.002096  | 96,038                      | 201                                       | 95,938  | 4,196,388  | 43.7                           |
| 35-36.....  | 0.002204  | 95,837                      | 211                                       | 95,731  | 4,100,450  | 42.8                           |
| 36-37.....  | 0.002317  | 95,626                      | 222                                       | 95,515  | 4,004,719  | 41.9                           |
| 37-38.....  | 0.002425  | 95,404                      | 231                                       | 95,289  | 3,909,204  | 41.0                           |
| 38-39.....  | 0.002529  | 95,173                      | 241                                       | 95,052  | 3,813,915  | 40.1                           |
| 39-40.....  | 0.002638  | 94,932                      | 250                                       | 94,807  | 3,718,863  | 39.2                           |
| 40-41.....  | 0.002769  | 94,682                      | 262                                       | 94,551  | 3,624,056  | 38.3                           |
| 41-42.....  | 0.002929  | 94,419                      | 277                                       | 94,281  | 3,529,505  | 37.4                           |
| 42-43.....  | 0.003111  | 94,143                      | 293                                       | 93,997  | 3,435,224  | 36.5                           |
| 43-44.....  | 0.003310  | 93,850                      | 311                                       | 93,695  | 3,341,228  | 35.6                           |
| 44-45.....  | 0.003525  | 93,539                      | 330                                       | 93,375  | 3,247,533  | 34.7                           |
| 45-46.....  | 0.003757  | 93,210                      | 350                                       | 93,035  | 3,154,158  | 33.8                           |
| 46-47.....  | 0.004020  | 92,860                      | 373                                       | 92,673  | 3,061,124  | 33.0                           |
| 47-48.....  | 0.004329  | 92,486                      | 400                                       | 92,286  | 2,968,451  | 32.1                           |
| 48-49.....  | 0.004697  | 92,086                      | 433                                       | 91,870  | 2,876,165  | 31.2                           |
| 49-50.....  | 0.005125  | 91,653                      | 470                                       | 91,418  | 2,784,295  | 30.4                           |
| 50-51.....  | 0.005575  | 91,184                      | 508                                       | 90,929  | 2,692,877  | 29.5                           |
| 51-52.....  | 0.006061  | 90,675                      | 550                                       | 90,400  | 2,601,947  | 28.7                           |
| 52-53.....  | 0.006637  | 90,126                      | 598                                       | 89,827  | 2,511,547  | 27.9                           |
| 53-54.....  | 0.007319  | 89,527                      | 655                                       | 89,200  | 2,421,720  | 27.1                           |
| 54-55.....  | 0.008078  | 88,872                      | 718                                       | 88,513  | 2,332,520  | 26.2                           |
| 55-56.....  | 0.008864  | 88,154                      | 781                                       | 87,764  | 2,244,007  | 25.5                           |
| 56-57.....  | 0.009654  | 87,373                      | 844                                       | 86,951  | 2,156,243  | 24.7                           |
| 57-58.....  | 0.010475  | 86,529                      | 906                                       | 86,076  | 2,069,292  | 23.9                           |
| 58-59.....  | 0.011343  | 85,623                      | 971                                       | 85,137  | 1,983,216  | 23.2                           |
| 59-60.....  | 0.012267  | 84,652                      | 1,038                                     | 84,133  | 1,898,079  | 22.4                           |
| 60-61.....  | 0.013259  | 83,613                      | 1,109                                     | 83,059  | 1,813,946  | 21.7                           |

**Table 7. Life table for the black population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table07.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table07.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.014298  | 82,505                      | 1,180                                     | 81,915  | 1,730,887  | 21.0                           |
| 62–63.....        | 0.015359  | 81,325                      | 1,249                                     | 80,700  | 1,648,972  | 20.3                           |
| 63–64.....        | 0.016417  | 80,076                      | 1,315                                     | 79,419  | 1,568,272  | 19.6                           |
| 64–65.....        | 0.017481  | 78,761                      | 1,377                                     | 78,073  | 1,488,853  | 18.9                           |
| 65–66.....        | 0.018635  | 77,385                      | 1,442                                     | 76,664  | 1,410,780  | 18.2                           |
| 66–67.....        | 0.019883  | 75,943                      | 1,510                                     | 75,188  | 1,334,117  | 17.6                           |
| 67–68.....        | 0.021127  | 74,433                      | 1,573                                     | 73,646  | 1,258,929  | 16.9                           |
| 68–69.....        | 0.022301  | 72,860                      | 1,625                                     | 72,048  | 1,185,283  | 16.3                           |
| 69–70.....        | 0.023515  | 71,235                      | 1,675                                     | 70,398  | 1,113,235  | 15.6                           |
| 70–71.....        | 0.024681  | 69,560                      | 1,717                                     | 68,702  | 1,042,837  | 15.0                           |
| 71–72.....        | 0.026448  | 67,843                      | 1,794                                     | 66,946  | 974,136  | 14.4                           |
| 72–73.....        | 0.028366  | 66,049                      | 1,874                                     | 65,112  | 907,190  | 13.7                           |
| 73–74.....        | 0.030734  | 64,175                      | 1,972                                     | 63,189  | 842,077  | 13.1                           |
| 74–75.....        | 0.033216  | 62,203                      | 2,066                                     | 61,170  | 778,888  | 12.5                           |
| 75–76.....        | 0.035961  | 60,137                      | 2,163                                     | 59,056  | 717,718  | 11.9                           |
| 76–77.....        | 0.038913  | 57,974                      | 2,256                                     | 56,846  | 658,663  | 11.4                           |
| 77–78.....        | 0.042338  | 55,718                      | 2,359                                     | 54,539  | 601,816  | 10.8                           |
| 78–79.....        | 0.046375  | 53,359                      | 2,475                                     | 52,122  | 547,277  | 10.3                           |
| 79–80.....        | 0.050161  | 50,885                      | 2,552                                     | 49,609  | 495,155  | 9.7                            |
| 80–81.....        | 0.054637  | 48,332                      | 2,641                                     | 47,012  | 445,547  | 9.2                            |
| 81–82.....        | 0.059225  | 45,692                      | 2,706                                     | 44,339  | 398,535  | 8.7                            |
| 82–83.....        | 0.064820  | 42,986                      | 2,786                                     | 41,592  | 354,196  | 8.2                            |
| 83–84.....        | 0.071047  | 40,199                      | 2,856                                     | 38,771  | 312,604  | 7.8                            |
| 84–85.....        | 0.077250  | 37,343                      | 2,885                                     | 35,901  | 273,833  | 7.3                            |
| 85–86.....        | 0.084677  | 34,458                      | 2,918                                     | 33,000  | 237,932  | 6.9                            |
| 86–87.....        | 0.092722  | 31,541                      | 2,925                                     | 30,078  | 204,932  | 6.5                            |
| 87–88.....        | 0.101399  | 28,616                      | 2,902                                     | 27,165  | 174,854  | 6.1                            |
| 88–89.....        | 0.110731  | 25,714                      | 2,847                                     | 24,291  | 147,689  | 5.7                            |
| 89–90.....        | 0.120738  | 22,867                      | 2,761                                     | 21,487  | 123,398  | 5.4                            |
| 90–91.....        | 0.131436  | 20,106                      | 2,643                                     | 18,785  | 101,911  | 5.1                            |
| 91–92.....        | 0.142834  | 17,463                      | 2,494                                     | 16,216  | 83,127   | 4.8                            |
| 92–93.....        | 0.154934  | 14,969                      | 2,319                                     | 13,809  | 66,910   | 4.5                            |
| 93–94.....        | 0.167731  | 12,650                      | 2,122                                     | 11,589  | 53,101   | 4.2                            |
| 94–95.....        | 0.181210  | 10,528                      | 1,908                                     | 9,574   | 41,512   | 3.9                            |
| 95–96.....        | 0.195349  | 8,620                       | 1,684                                     | 7,778   | 31,938   | 3.7                            |
| 96–97.....        | 0.210113  | 6,936                       | 1,457                                     | 6,208   | 24,159   | 3.5                            |
| 97–98.....        | 0.225460  | 5,479                       | 1,235                                     | 4,861   | 17,952   | 3.3                            |
| 98–99.....        | 0.241335  | 4,244                       | 1,024                                     | 3,732   | 13,090   | 3.1                            |
| 99–100.....       | 0.257674  | 3,220                       | 830                                       | 2,805   | 9,359  | 2.9                            |
| 100 and over..... | 1.000000  | 2,390                       | 2,390                                     | 6,554   | 6,554  | 2.7                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 8. Life table for black males: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table08.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table08.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.011882  | 100,000                     | 1,188                                     | 98,973  | 7,194,460  | 71.9                           |
| 1-2.....    | 0.000622  | 98,812                      | 61  | 98,781  | 7,095,487  | 71.8                           |
| 2-3.....    | 0.000406  | 98,750                      | 40  | 98,730  | 6,996,706  | 70.9                           |
| 3-4.....    | 0.000347  | 98,710                      | 34  | 98,693  | 6,897,976  | 69.9                           |
| 4-5.....    | 0.000231  | 98,676                      | 23  | 98,665  | 6,799,283  | 68.9                           |
| 5-6.....    | 0.000231  | 98,653                      | 23  | 98,642  | 6,700,618  | 67.9                           |
| 6-7.....    | 0.000211  | 98,630                      | 21  | 98,620  | 6,601,976  | 66.9                           |
| 7-8.....    | 0.000192  | 98,610                      | 19  | 98,600  | 6,503,356  | 66.0                           |
| 8-9.....    | 0.000169  | 98,591                      | 17  | 98,582  | 6,404,756  | 65.0                           |
| 9-10.....   | 0.000142  | 98,574                      | 14  | 98,567  | 6,306,173  | 64.0                           |
| 10-11.....  | 0.000125  | 98,560                      | 12  | 98,554  | 6,207,606  | 63.0                           |
| 11-12.....  | 0.000140  | 98,548                      | 14  | 98,541  | 6,109,052  | 62.0                           |
| 12-13.....  | 0.000211  | 98,534                      | 21  | 98,524  | 6,010,512  | 61.0                           |
| 13-14.....  | 0.000352  | 98,513                      | 35  | 98,496  | 5,911,988  | 60.0                           |
| 14-15.....  | 0.000546  | 98,478                      | 54  | 98,452  | 5,813,492  | 59.0                           |
| 15-16.....  | 0.000757  | 98,425                      | 75  | 98,387  | 5,715,041  | 58.1                           |
| 16-17.....  | 0.000965  | 98,350                      | 95  | 98,303  | 5,616,654  | 57.1                           |
| 17-18.....  | 0.001172  | 98,255                      | 115                                       | 98,198  | 5,518,351  | 56.2                           |
| 18-19.....  | 0.001370  | 98,140                      | 134                                       | 98,073  | 5,420,153  | 55.2                           |
| 19-20.....  | 0.001554  | 98,006                      | 152                                       | 97,929  | 5,322,080  | 54.3                           |
| 20-21.....  | 0.001736  | 97,853                      | 170                                       | 97,768  | 5,224,151  | 53.4                           |
| 21-22.....  | 0.001909  | 97,683                      | 186                                       | 97,590  | 5,126,383  | 52.5                           |
| 22-23.....  | 0.002051  | 97,497                      | 200                                       | 97,397  | 5,028,792  | 51.6                           |
| 23-24.....  | 0.002154  | 97,297                      | 210                                       | 97,192  | 4,931,396  | 50.7                           |
| 24-25.....  | 0.002225  | 97,087                      | 216                                       | 96,979  | 4,834,203  | 49.8                           |
| 25-26.....  | 0.002287  | 96,871                      | 222                                       | 96,761  | 4,737,224  | 48.9                           |
| 26-27.....  | 0.002346  | 96,650                      | 227                                       | 96,537  | 4,640,463  | 48.0                           |
| 27-28.....  | 0.002397  | 96,423                      | 231                                       | 96,308  | 4,543,927  | 47.1                           |
| 28-29.....  | 0.002444  | 96,192                      | 235                                       | 96,074  | 4,447,619  | 46.2                           |
| 29-30.....  | 0.002494  | 95,957                      | 239                                       | 95,837  | 4,351,545  | 45.3                           |
| 30-31.....  | 0.002543  | 95,718                      | 243                                       | 95,596  | 4,255,708  | 44.5                           |
| 31-32.....  | 0.002598  | 95,474                      | 248                                       | 95,350  | 4,160,111  | 43.6                           |
| 32-33.....  | 0.002675  | 95,226                      | 255                                       | 95,099  | 4,064,761  | 42.7                           |
| 33-34.....  | 0.002779  | 94,972                      | 264                                       | 94,840  | 3,969,662  | 41.8                           |
| 34-35.....  | 0.002899  | 94,708                      | 275                                       | 94,570  | 3,874,823  | 40.9                           |
| 35-36.....  | 0.003034  | 94,433                      | 287                                       | 94,290  | 3,780,252  | 40.0                           |
| 36-37.....  | 0.003172  | 94,147                      | 299                                       | 93,997  | 3,685,963  | 39.2                           |
| 37-38.....  | 0.003292  | 93,848                      | 309                                       | 93,693  | 3,591,965  | 38.3                           |
| 38-39.....  | 0.003391  | 93,539                      | 317                                       | 93,380  | 3,498,272  | 37.4                           |
| 39-40.....  | 0.003483  | 93,222                      | 325                                       | 93,059  | 3,404,891  | 36.5                           |
| 40-41.....  | 0.003593  | 92,897                      | 334                                       | 92,730  | 3,311,832  | 35.7                           |
| 41-42.....  | 0.003742  | 92,563                      | 346                                       | 92,390  | 3,219,102  | 34.8                           |
| 42-43.....  | 0.003932  | 92,217                      | 363                                       | 92,036  | 3,126,712  | 33.9                           |
| 43-44.....  | 0.004165  | 91,854                      | 383                                       | 91,663  | 3,034,676  | 33.0                           |
| 44-45.....  | 0.004434  | 91,472                      | 406                                       | 91,269  | 2,943,013  | 32.2                           |
| 45-46.....  | 0.004731  | 91,066                      | 431                                       | 90,851  | 2,851,744  | 31.3                           |
| 46-47.....  | 0.005061  | 90,635                      | 459                                       | 90,406  | 2,760,893  | 30.5                           |
| 47-48.....  | 0.005438  | 90,177                      | 490                                       | 89,931  | 2,670,487  | 29.6                           |
| 48-49.....  | 0.005874  | 89,686                      | 527                                       | 89,423  | 2,580,556  | 28.8                           |
| 49-50.....  | 0.006376  | 89,159                      | 569                                       | 88,875  | 2,491,133  | 27.9                           |
| 50-51.....  | 0.006905  | 88,591                      | 612                                       | 88,285  | 2,402,258  | 27.1                           |
| 51-52.....  | 0.007485  | 87,979                      | 659                                       | 87,650  | 2,313,973  | 26.3                           |
| 52-53.....  | 0.008192  | 87,321                      | 715                                       | 86,963  | 2,226,323  | 25.5                           |
| 53-54.....  | 0.009050  | 86,605                      | 784                                       | 86,214  | 2,139,360  | 24.7                           |
| 54-55.....  | 0.010020  | 85,822                      | 860                                       | 85,392  | 2,053,146  | 23.9                           |
| 55-56.....  | 0.011026  | 84,962                      | 937                                       | 84,493  | 1,967,755  | 23.2                           |
| 56-57.....  | 0.012041  | 84,025                      | 1,012                                     | 83,519  | 1,883,261  | 22.4                           |
| 57-58.....  | 0.013122  | 83,013                      | 1,089                                     | 82,468  | 1,799,742  | 21.7                           |
| 58-59.....  | 0.014298  | 81,924                      | 1,171                                     | 81,338  | 1,717,274  | 21.0                           |
| 59-60.....  | 0.015581  | 80,752                      | 1,258                                     | 80,123  | 1,635,936  | 20.3                           |



**Table 8. Life table for black males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table08.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table08.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 60–61.....        | 0.016979  | 79,494                      | 1,350                                     | 78,819  | 1,555,812  | 19.6                           |
| 61–62.....        | 0.018443  | 78,144                      | 1,441                                     | 77,424  | 1,476,993  | 18.9                           |
| 62–63.....        | 0.019920  | 76,703                      | 1,528                                     | 75,939  | 1,399,569  | 18.2                           |
| 63–64.....        | 0.021354  | 75,175                      | 1,605                                     | 74,373  | 1,323,630  | 17.6                           |
| 64–65.....        | 0.022760  | 73,570                      | 1,674                                     | 72,733  | 1,249,257  | 17.0                           |
| 65–66.....        | 0.024279  | 71,895                      | 1,746                                     | 71,023  | 1,176,525  | 16.4                           |
| 66–67.....        | 0.025931  | 70,150                      | 1,819                                     | 69,240  | 1,105,502  | 15.8                           |
| 67–68.....        | 0.027551  | 68,331                      | 1,883                                     | 67,390  | 1,036,262  | 15.2                           |
| 68–69.....        | 0.029041  | 66,448                      | 1,930                                     | 65,483  | 968,872  | 14.6                           |
| 69–70.....        | 0.030501  | 64,519                      | 1,968                                     | 63,535  | 903,388  | 14.0                           |
| 70–71.....        | 0.031843  | 62,551                      | 1,992                                     | 61,555  | 839,854  | 13.4                           |
| 71–72.....        | 0.034142  | 60,559                      | 2,068                                     | 59,525  | 778,299  | 12.9                           |
| 72–73.....        | 0.036113  | 58,491                      | 2,112                                     | 57,435  | 718,774  | 12.3                           |
| 73–74.....        | 0.039043  | 56,379                      | 2,201                                     | 55,278  | 661,339  | 11.7                           |
| 74–75.....        | 0.041873  | 54,178                      | 2,269                                     | 53,044  | 606,060  | 11.2                           |
| 75–76.....        | 0.044907  | 51,909                      | 2,331                                     | 50,744  | 553,017  | 10.7                           |
| 76–77.....        | 0.048772  | 49,578                      | 2,418                                     | 48,369  | 502,273  | 10.1                           |
| 77–78.....        | 0.052158  | 47,160                      | 2,460                                     | 45,930  | 453,904  | 9.6                            |
| 78–79.....        | 0.057218  | 44,700                      | 2,558                                     | 43,422  | 407,974  | 9.1                            |
| 79–80.....        | 0.062038  | 42,143                      | 2,614                                     | 40,835  | 364,552  | 8.7                            |
| 80–81.....        | 0.066654  | 39,528                      | 2,635                                     | 38,211  | 323,717  | 8.2                            |
| 81–82.....        | 0.072113  | 36,894                      | 2,660                                     | 35,563  | 285,506  | 7.7                            |
| 82–83.....        | 0.079691  | 34,233                      | 2,728                                     | 32,869  | 249,942  | 7.3                            |
| 83–84.....        | 0.087605  | 31,505                      | 2,760                                     | 30,125  | 217,073  | 6.9                            |
| 84–85.....        | 0.094030  | 28,745                      | 2,703                                     | 27,394  | 186,948  | 6.5                            |
| 85–86.....        | 0.100906  | 26,042                      | 2,628                                     | 24,728  | 159,555  | 6.1                            |
| 86–87.....        | 0.110227  | 23,414                      | 2,581                                     | 22,124  | 134,827  | 5.8                            |
| 87–88.....        | 0.120226  | 20,833                      | 2,505                                     | 19,581  | 112,703  | 5.4                            |
| 88–89.....        | 0.130918  | 18,329                      | 2,400                                     | 17,129  | 93,122   | 5.1                            |
| 89–90.....        | 0.142314  | 15,929                      | 2,267                                     | 14,796  | 75,993   | 4.8                            |
| 90–91.....        | 0.154416  | 13,662                      | 2,110                                     | 12,607  | 61,197   | 4.5                            |
| 91–92.....        | 0.167219  | 11,553                      | 1,932                                     | 10,587  | 48,590   | 4.2                            |
| 92–93.....        | 0.180709  | 9,621                       | 1,739                                     | 8,751   | 38,003   | 4.0                            |
| 93–94.....        | 0.194863  | 7,882                       | 1,536                                     | 7,114   | 29,252   | 3.7                            |
| 94–95.....        | 0.209647  | 6,346                       | 1,330                                     | 5,681   | 22,138   | 3.5                            |
| 95–96.....        | 0.225017  | 5,016                       | 1,129                                     | 4,451   | 16,457   | 3.3                            |
| 96–97.....        | 0.240921  | 3,887                       | 936                                       | 3,419   | 12,005   | 3.1                            |
| 97–98.....        | 0.257294  | 2,951                       | 759                                       | 2,571   | 8,586  | 2.9                            |
| 98–99.....        | 0.274063  | 2,191                       | 601                                       | 1,891   | 6,015  | 2.7                            |
| 99–100.....       | 0.291147  | 1,591                       | 463                                       | 1,359   | 4,124  | 2.6                            |
| 100 and over..... | 1.000000  | 1,128                       | 1,128                                     | 2,765   | 2,765  | 2.5                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 9. Life table for black females: United States, 2017**

Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table09.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table09.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.009674  | 100,000                     | 967                                       | 99,157  | 7,845,941  | 78.5                           |
| 1-2.....    | 0.000588  | 99,033                      | 58  | 99,003  | 7,746,784  | 78.2                           |
| 2-3.....    | 0.000355  | 98,974                      | 35  | 98,957  | 7,647,780  | 77.3                           |
| 3-4.....    | 0.000214  | 98,939                      | 21  | 98,929  | 7,548,824  | 76.3                           |
| 4-5.....    | 0.000248  | 98,918                      | 25  | 98,906  | 7,449,895  | 75.3                           |
| 5-6.....    | 0.000197  | 98,894                      | 19  | 98,884  | 7,350,989  | 74.3                           |
| 6-7.....    | 0.000171  | 98,874                      | 17  | 98,866  | 7,252,105  | 73.3                           |
| 7-8.....    | 0.000151  | 98,857                      | 15  | 98,850  | 7,153,239  | 72.4                           |
| 8-9.....    | 0.000139  | 98,842                      | 14  | 98,835  | 7,054,390  | 71.4                           |
| 9-10.....   | 0.000133  | 98,829                      | 13  | 98,822  | 6,955,554  | 70.4                           |
| 10-11.....  | 0.000133  | 98,815                      | 13  | 98,809  | 6,856,732  | 69.4                           |
| 11-12.....  | 0.000140  | 98,802                      | 14  | 98,795  | 6,757,923  | 68.4                           |
| 12-13.....  | 0.000154  | 98,788                      | 15  | 98,781  | 6,659,128  | 67.4                           |
| 13-14.....  | 0.000174  | 98,773                      | 17  | 98,765  | 6,560,347  | 66.4                           |
| 14-15.....  | 0.000201  | 98,756                      | 20  | 98,746  | 6,461,583  | 65.4                           |
| 15-16.....  | 0.000231  | 98,736                      | 23  | 98,725  | 6,362,837  | 64.4                           |
| 16-17.....  | 0.000267  | 98,713                      | 26  | 98,700  | 6,264,112  | 63.5                           |
| 17-18.....  | 0.000313  | 98,687                      | 31  | 98,671  | 6,165,412  | 62.5                           |
| 18-19.....  | 0.000372  | 98,656                      | 37  | 98,638  | 6,066,740  | 61.5                           |
| 19-20.....  | 0.000438  | 98,619                      | 43  | 98,598  | 5,968,103  | 60.5                           |
| 20-21.....  | 0.000508  | 98,576                      | 50  | 98,551  | 5,869,505  | 59.5                           |
| 21-22.....  | 0.000576  | 98,526                      | 57  | 98,498  | 5,770,954  | 58.6                           |
| 22-23.....  | 0.000637  | 98,469                      | 63  | 98,438  | 5,672,456  | 57.6                           |
| 23-24.....  | 0.000688  | 98,407                      | 68  | 98,373  | 5,574,018  | 56.6                           |
| 24-25.....  | 0.000731  | 98,339                      | 72  | 98,303  | 5,475,646  | 55.7                           |
| 25-26.....  | 0.000772  | 98,267                      | 76  | 98,229  | 5,377,343  | 54.7                           |
| 26-27.....  | 0.000815  | 98,191                      | 80  | 98,151  | 5,279,114  | 53.8                           |
| 27-28.....  | 0.000859  | 98,111                      | 84  | 98,069  | 5,180,963  | 52.8                           |
| 28-29.....  | 0.000908  | 98,027                      | 89  | 97,982  | 5,082,893  | 51.9                           |
| 29-30.....  | 0.000965  | 97,938                      | 94  | 97,891  | 4,984,911  | 50.9                           |
| 30-31.....  | 0.001030  | 97,843                      | 101                                       | 97,793  | 4,887,020  | 49.9                           |
| 31-32.....  | 0.001105  | 97,743                      | 108                                       | 97,689  | 4,789,227  | 49.0                           |
| 32-33.....  | 0.001186  | 97,635                      | 116                                       | 97,577  | 4,691,539  | 48.1                           |
| 33-34.....  | 0.001269  | 97,519                      | 124                                       | 97,457  | 4,593,962  | 47.1                           |
| 34-35.....  | 0.001353  | 97,395                      | 132                                       | 97,329  | 4,496,505  | 46.2                           |
| 35-36.....  | 0.001440  | 97,263                      | 140                                       | 97,193  | 4,399,176  | 45.2                           |
| 36-37.....  | 0.001536  | 97,123                      | 149                                       | 97,049  | 4,301,983  | 44.3                           |
| 37-38.....  | 0.001637  | 96,974                      | 159                                       | 96,895  | 4,204,934  | 43.4                           |
| 38-39.....  | 0.001750  | 96,815                      | 169                                       | 96,731  | 4,108,039  | 42.4                           |
| 39-40.....  | 0.001880  | 96,646                      | 182                                       | 96,555  | 4,011,309  | 41.5                           |
| 40-41.....  | 0.002033  | 96,464                      | 196                                       | 96,366  | 3,914,754  | 40.6                           |
| 41-42.....  | 0.002206  | 96,268                      | 212                                       | 96,162  | 3,818,387  | 39.7                           |
| 42-43.....  | 0.002383  | 96,056                      | 229                                       | 95,941  | 3,722,226  | 38.8                           |
| 43-44.....  | 0.002553  | 95,827                      | 245                                       | 95,704  | 3,626,284  | 37.8                           |
| 44-45.....  | 0.002721  | 95,582                      | 260                                       | 95,452  | 3,530,580  | 36.9                           |
| 45-46.....  | 0.002895  | 95,322                      | 276                                       | 95,184  | 3,435,128  | 36.0                           |
| 46-47.....  | 0.003099  | 95,046                      | 295                                       | 94,899  | 3,339,944  | 35.1                           |
| 47-48.....  | 0.003347  | 94,752                      | 317                                       | 94,593  | 3,245,045  | 34.2                           |
| 48-49.....  | 0.003655  | 94,434                      | 345                                       | 94,262  | 3,150,452  | 33.4                           |
| 49-50.....  | 0.004018  | 94,089                      | 378                                       | 93,900  | 3,056,190  | 32.5                           |
| 50-51.....  | 0.004400  | 93,711                      | 412                                       | 93,505  | 2,962,290  | 31.6                           |
| 51-52.....  | 0.004802  | 93,299                      | 448                                       | 93,075  | 2,868,785  | 30.7                           |
| 52-53.....  | 0.005266  | 92,851                      | 489                                       | 92,606  | 2,775,710  | 29.9                           |
| 53-54.....  | 0.005797  | 92,362                      | 535                                       | 92,094  | 2,683,104  | 29.0                           |
| 54-55.....  | 0.006375  | 91,826                      | 585                                       | 91,534  | 2,591,009  | 28.2                           |
| 55-56.....  | 0.006974  | 91,241                      | 636                                       | 90,923  | 2,499,476  | 27.4                           |
| 56-57.....  | 0.007576  | 90,605                      | 686                                       | 90,262  | 2,408,553  | 26.6                           |
| 57-58.....  | 0.008184  | 89,918                      | 736                                       | 89,550  | 2,318,291  | 25.8                           |
| 58-59.....  | 0.008803  | 89,182                      | 785                                       | 88,790  | 2,228,741  | 25.0                           |
| 59-60.....  | 0.009446  | 88,397                      | 835                                       | 87,980  | 2,139,951  | 24.2                           |
| 60-61.....  | 0.010126  | 87,562                      | 887                                       | 87,119  | 2,051,971  | 23.4                           |

**Table 9. Life table for black females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table09.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table09.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.010845  | 86,676                      | 940                                       | 86,206  | 1,964,852  | 22.7                           |
| 62–63.....        | 0.011602  | 85,736                      | 995                                       | 85,238  | 1,878,646  | 21.9                           |
| 63–64.....        | 0.012397  | 84,741                      | 1,051                                     | 84,216  | 1,793,408  | 21.2                           |
| 64–65.....        | 0.013231  | 83,691                      | 1,107                                     | 83,137  | 1,709,192  | 20.4                           |
| 65–66.....        | 0.014149  | 82,583                      | 1,169                                     | 81,999  | 1,626,055  | 19.7                           |
| 66–67.....        | 0.015137  | 81,415                      | 1,232                                     | 80,799  | 1,544,056  | 19.0                           |
| 67–68.....        | 0.016142  | 80,182                      | 1,294                                     | 79,535  | 1,463,257  | 18.2                           |
| 68–69.....        | 0.017121  | 78,888                      | 1,351                                     | 78,213  | 1,383,722  | 17.5                           |
| 69–70.....        | 0.018187  | 77,537                      | 1,410                                     | 76,832  | 1,305,509  | 16.8                           |
| 70–71.....        | 0.019264  | 76,127                      | 1,467                                     | 75,394  | 1,228,677  | 16.1                           |
| 71–72.....        | 0.020677  | 74,661                      | 1,544                                     | 73,889  | 1,153,283  | 15.4                           |
| 72–73.....        | 0.022638  | 73,117                      | 1,655                                     | 72,289  | 1,079,394  | 14.8                           |
| 73–74.....        | 0.024656  | 71,462                      | 1,762                                     | 70,581  | 1,007,105  | 14.1                           |
| 74–75.....        | 0.026985  | 69,700                      | 1,881                                     | 68,759  | 936,524  | 13.4                           |
| 75–76.....        | 0.029625  | 67,819                      | 2,009                                     | 66,814  | 867,765  | 12.8                           |
| 76–77.....        | 0.032101  | 65,810                      | 2,113                                     | 64,754  | 800,950  | 12.2                           |
| 77–78.....        | 0.035679  | 63,697                      | 2,273                                     | 62,561  | 736,197  | 11.6                           |
| 78–79.....        | 0.039136  | 61,425                      | 2,404                                     | 60,223  | 673,636  | 11.0                           |
| 79–80.....        | 0.042432  | 59,021                      | 2,504                                     | 57,769  | 613,413  | 10.4                           |
| 80–81.....        | 0.047008  | 56,516                      | 2,657                                     | 55,188  | 555,644  | 9.8                            |
| 81–82.....        | 0.051308  | 53,860                      | 2,763                                     | 52,478  | 500,456  | 9.3                            |
| 82–83.....        | 0.055972  | 51,096                      | 2,860                                     | 49,666  | 447,979  | 8.8                            |
| 83–84.....        | 0.061447  | 48,236                      | 2,964                                     | 46,754  | 398,312  | 8.3                            |
| 84–85.....        | 0.067875  | 45,272                      | 3,073                                     | 43,736  | 351,558  | 7.8                            |
| 85–86.....        | 0.073825  | 42,199                      | 3,115                                     | 40,642  | 307,822  | 7.3                            |
| 86–87.....        | 0.081779  | 39,084                      | 3,196                                     | 37,486  | 267,180  | 6.8                            |
| 87–88.....        | 0.090536  | 35,888                      | 3,249                                     | 34,263  | 229,694  | 6.4                            |
| 88–89.....        | 0.100072  | 32,639                      | 3,266                                     | 31,006  | 195,431  | 6.0                            |
| 89–90.....        | 0.110418  | 29,372                      | 3,243                                     | 27,751  | 164,426  | 5.6                            |
| 90–91.....        | 0.121605  | 26,129                      | 3,177                                     | 24,540  | 136,675  | 5.2                            |
| 91–92.....        | 0.133654  | 22,952                      | 3,068                                     | 21,418  | 112,134  | 4.9                            |
| 92–93.....        | 0.146574  | 19,884                      | 2,915                                     | 18,427  | 90,716   | 4.6                            |
| 93–94.....        | 0.160368  | 16,970                      | 2,721                                     | 15,609  | 72,289   | 4.3                            |
| 94–95.....        | 0.175024  | 14,248                      | 2,494                                     | 13,001  | 56,680   | 4.0                            |
| 95–96.....        | 0.190515  | 11,754                      | 2,239                                     | 10,635  | 43,679   | 3.7                            |
| 96–97.....        | 0.206800  | 9,515                       | 1,968                                     | 8,531   | 33,044   | 3.5                            |
| 97–98.....        | 0.223822  | 7,547                       | 1,689                                     | 6,703   | 24,513   | 3.2                            |
| 98–99.....        | 0.241511  | 5,858                       | 1,415                                     | 5,151   | 17,810   | 3.0                            |
| 99–100.....       | 0.259776  | 4,443                       | 1,154                                     | 3,866   | 12,659   | 2.8                            |
| 100 and over..... | 1.000000  | 3,289                       | 3,289                                     | 8,793   | 8,793  | 2.7                            |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 10. Life table for the Hispanic population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table10.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table10.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.005088  | 100,000                     | 509                                       | 99,549  | 8,181,661  | 81.8                           |
| 1-2.....    | 0.000312  | 99,491                      | 31  | 99,476  | 8,082,112  | 81.2                           |
| 2-3.....    | 0.000186  | 99,460                      | 18  | 99,451  | 7,982,637  | 80.3                           |
| 3-4.....    | 0.000162  | 99,442                      | 16  | 99,434  | 7,883,186  | 79.3                           |
| 4-5.....    | 0.000107  | 99,426                      | 11  | 99,420  | 7,783,752  | 78.3                           |
| 5-6.....    | 0.000114  | 99,415                      | 11  | 99,409  | 7,684,332  | 77.3                           |
| 6-7.....    | 0.000106  | 99,404                      | 11  | 99,398  | 7,584,922  | 76.3                           |
| 7-8.....    | 0.000099  | 99,393                      | 10  | 99,388  | 7,485,524  | 75.3                           |
| 8-9.....    | 0.000090  | 99,383                      | 9   | 99,379  | 7,386,136  | 74.3                           |
| 9-10.....   | 0.000081  | 99,374                      | 8   | 99,370  | 7,286,757  | 73.3                           |
| 10-11.....  | 0.000076  | 99,366                      | 8   | 99,362  | 7,187,387  | 72.3                           |
| 11-12.....  | 0.000080  | 99,359                      | 8   | 99,355  | 7,088,024  | 71.3                           |
| 12-13.....  | 0.000103  | 99,351                      | 10  | 99,346  | 6,988,670  | 70.3                           |
| 13-14.....  | 0.000149  | 99,341                      | 15  | 99,333  | 6,889,324  | 69.4                           |
| 14-15.....  | 0.000213  | 99,326                      | 21  | 99,315  | 6,789,991  | 68.4                           |
| 15-16.....  | 0.000286  | 99,305                      | 28  | 99,290  | 6,690,676  | 67.4                           |
| 16-17.....  | 0.000361  | 99,276                      | 36  | 99,258  | 6,591,385  | 66.4                           |
| 17-18.....  | 0.000435  | 99,240                      | 43  | 99,219  | 6,492,127  | 65.4                           |
| 18-19.....  | 0.000503  | 99,197                      | 50  | 99,172  | 6,392,908  | 64.4                           |
| 19-20.....  | 0.000566  | 99,147                      | 56  | 99,119  | 6,293,736  | 63.5                           |
| 20-21.....  | 0.000629  | 99,091                      | 62  | 99,060  | 6,194,617  | 62.5                           |
| 21-22.....  | 0.000692  | 99,029                      | 68  | 98,995  | 6,095,557  | 61.6                           |
| 22-23.....  | 0.000745  | 98,960                      | 74  | 98,923  | 5,996,562  | 60.6                           |
| 23-24.....  | 0.000788  | 98,887                      | 78  | 98,848  | 5,897,639  | 59.6                           |
| 24-25.....  | 0.000822  | 98,809                      | 81  | 98,768  | 5,798,791  | 58.7                           |
| 25-26.....  | 0.000853  | 98,727                      | 84  | 98,685  | 5,700,023  | 57.7                           |
| 26-27.....  | 0.000882  | 98,643                      | 87  | 98,600  | 5,601,338  | 56.8                           |
| 27-28.....  | 0.000906  | 98,556                      | 89  | 98,511  | 5,502,738  | 55.8                           |
| 28-29.....  | 0.000923  | 98,467                      | 91  | 98,421  | 5,404,227  | 54.9                           |
| 29-30.....  | 0.000936  | 98,376                      | 92  | 98,330  | 5,305,805  | 53.9                           |
| 30-31.....  | 0.000946  | 98,284                      | 93  | 98,237  | 5,207,475  | 53.0                           |
| 31-32.....  | 0.000959  | 98,191                      | 94  | 98,144  | 5,109,238  | 52.0                           |
| 32-33.....  | 0.000979  | 98,097                      | 96  | 98,049  | 5,011,094  | 51.1                           |
| 33-34.....  | 0.001011  | 98,001                      | 99  | 97,951  | 4,913,045  | 50.1                           |
| 34-35.....  | 0.001050  | 97,902                      | 103                                       | 97,850  | 4,815,094  | 49.2                           |
| 35-36.....  | 0.001097  | 97,799                      | 107                                       | 97,745  | 4,717,244  | 48.2                           |
| 36-37.....  | 0.001144  | 97,692                      | 112                                       | 97,636  | 4,619,499  | 47.3                           |
| 37-38.....  | 0.001188  | 97,580                      | 116                                       | 97,522  | 4,521,863  | 46.3                           |
| 38-39.....  | 0.001227  | 97,464                      | 120                                       | 97,404  | 4,424,341  | 45.4                           |
| 39-40.....  | 0.001266  | 97,344                      | 123                                       | 97,283  | 4,326,937  | 44.4                           |
| 40-41.....  | 0.001309  | 97,221                      | 127                                       | 97,157  | 4,229,655  | 43.5                           |
| 41-42.....  | 0.001367  | 97,094                      | 133                                       | 97,027  | 4,132,497  | 42.6                           |
| 42-43.....  | 0.001448  | 96,961                      | 140                                       | 96,891  | 4,035,470  | 41.6                           |
| 43-44.....  | 0.001558  | 96,821                      | 151                                       | 96,745  | 3,938,579  | 40.7                           |
| 44-45.....  | 0.001694  | 96,670                      | 164                                       | 96,588  | 3,841,834  | 39.7                           |
| 45-46.....  | 0.001843  | 96,506                      | 178                                       | 96,417  | 3,745,247  | 38.8                           |
| 46-47.....  | 0.002004  | 96,328                      | 193                                       | 96,232  | 3,648,830  | 37.9                           |
| 47-48.....  | 0.002192  | 96,135                      | 211                                       | 96,030  | 3,552,598  | 37.0                           |
| 48-49.....  | 0.002414  | 95,924                      | 232                                       | 95,808  | 3,456,569  | 36.0                           |
| 49-50.....  | 0.002666  | 95,693                      | 255                                       | 95,565  | 3,360,760  | 35.1                           |
| 50-51.....  | 0.002947  | 95,438                      | 281                                       | 95,297  | 3,265,195  | 34.2                           |
| 51-52.....  | 0.003245  | 95,156                      | 309                                       | 95,002  | 3,169,898  | 33.3                           |
| 52-53.....  | 0.003546  | 94,848                      | 336                                       | 94,679  | 3,074,896  | 32.4                           |
| 53-54.....  | 0.003839  | 94,511                      | 363                                       | 94,330  | 2,980,217  | 31.5                           |
| 54-55.....  | 0.004133  | 94,148                      | 389                                       | 93,954  | 2,885,887  | 30.7                           |
| 55-56.....  | 0.004434  | 93,759                      | 416                                       | 93,551  | 2,791,933  | 29.8                           |
| 56-57.....  | 0.004767  | 93,344                      | 445                                       | 93,121  | 2,698,382  | 28.9                           |
| 57-58.....  | 0.005158  | 92,899                      | 479                                       | 92,659  | 2,605,261  | 28.0                           |
| 58-59.....  | 0.005628  | 92,419                      | 520                                       | 92,159  | 2,512,602  | 27.2                           |
| 59-60.....  | 0.006172  | 91,899                      | 567                                       | 91,616  | 2,420,442  | 26.3                           |
| 60-61.....  | 0.006785  | 91,332                      | 620                                       | 91,022  | 2,328,827  | 25.5                           |

See footnotes at end of table.

**Table 10. Life table for the Hispanic population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table10.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table10.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.007429  | 90,712                      | 674                                       | 90,376  | 2,237,804  | 24.7                           |
| 62–63.....        | 0.008057  | 90,039                      | 725                                       | 89,676  | 2,147,429  | 23.9                           |
| 63–64.....        | 0.008628  | 89,313                      | 771                                       | 88,928  | 2,057,753  | 23.0                           |
| 64–65.....        | 0.009164  | 88,543                      | 811                                       | 88,137  | 1,968,825  | 22.2                           |
| 65–66.....        | 0.009723  | 87,731                      | 853                                       | 87,305  | 1,880,688  | 21.4                           |
| 66–67.....        | 0.010364  | 86,878                      | 900                                       | 86,428  | 1,793,384  | 20.6                           |
| 67–68.....        | 0.011096  | 85,978                      | 954                                       | 85,501  | 1,706,956  | 19.9                           |
| 68–69.....        | 0.011955  | 85,024                      | 1,016                                     | 84,515  | 1,621,455  | 19.1                           |
| 69–70.....        | 0.012947  | 84,007                      | 1,088                                     | 83,463  | 1,536,940  | 18.3                           |
| 70–71.....        | 0.014059  | 82,920                      | 1,166                                     | 82,337  | 1,453,476  | 17.5                           |
| 71–72.....        | 0.015290  | 81,754                      | 1,250                                     | 81,129  | 1,371,140  | 16.8                           |
| 72–73.....        | 0.016675  | 80,504                      | 1,342                                     | 79,833  | 1,290,011  | 16.0                           |
| 73–74.....        | 0.018233  | 79,161                      | 1,443                                     | 78,440  | 1,210,178  | 15.3                           |
| 74–75.....        | 0.019990  | 77,718                      | 1,554                                     | 76,941  | 1,131,739  | 14.6                           |
| 75–76.....        | 0.021952  | 76,164                      | 1,672                                     | 75,328  | 1,054,797  | 13.8                           |
| 76–77.....        | 0.024206  | 74,492                      | 1,803                                     | 73,591  | 979,469  | 13.1                           |
| 77–78.....        | 0.026847  | 72,689                      | 1,952                                     | 71,714  | 905,878  | 12.5                           |
| 78–79.....        | 0.029863  | 70,738                      | 2,112                                     | 69,682  | 834,164  | 11.8                           |
| 79–80.....        | 0.033182  | 68,625                      | 2,277                                     | 67,487  | 764,483  | 11.1                           |
| 80–81.....        | 0.036963  | 66,348                      | 2,452                                     | 65,122  | 696,996  | 10.5                           |
| 81–82.....        | 0.041047  | 63,896                      | 2,623                                     | 62,584  | 631,874  | 9.9                            |
| 82–83.....        | 0.045819  | 61,273                      | 2,807                                     | 59,869  | 569,289  | 9.3                            |
| 83–84.....        | 0.051689  | 58,466                      | 3,022                                     | 56,955  | 509,420  | 8.7                            |
| 84–85.....        | 0.057707  | 55,444                      | 3,199                                     | 53,844  | 452,465  | 8.2                            |
| 85–86.....        | 0.064217  | 52,244                      | 3,355                                     | 50,567  | 398,622  | 7.6                            |
| 86–87.....        | 0.071074  | 48,889                      | 3,475                                     | 47,152  | 348,055  | 7.1                            |
| 87–88.....        | 0.080180  | 45,414                      | 3,641                                     | 43,594  | 300,903  | 6.6                            |
| 88–89.....        | 0.090255  | 41,773                      | 3,770                                     | 39,888  | 257,309  | 6.2                            |
| 89–90.....        | 0.101352  | 38,003                      | 3,852                                     | 36,077  | 217,421  | 5.7                            |
| 90–91.....        | 0.113511  | 34,151                      | 3,877                                     | 32,213  | 181,344  | 5.3                            |
| 91–92.....        | 0.126761  | 30,275                      | 3,838                                     | 28,356  | 149,131  | 4.9                            |
| 92–93.....        | 0.141114  | 26,437                      | 3,731                                     | 24,572  | 120,776  | 4.6                            |
| 93–94.....        | 0.156560  | 22,706                      | 3,555                                     | 20,929  | 96,204   | 4.2                            |
| 94–95.....        | 0.173066  | 19,151                      | 3,314                                     | 17,494  | 75,275   | 3.9                            |
| 95–96.....        | 0.190573  | 15,837                      | 3,018                                     | 14,328  | 57,781   | 3.6                            |
| 96–97.....        | 0.208996  | 12,819                      | 2,679                                     | 11,479  | 43,453   | 3.4                            |
| 97–98.....        | 0.228221  | 10,140                      | 2,314                                     | 8,983   | 31,973   | 3.2                            |
| 98–99.....        | 0.248109  | 7,826                       | 1,942                                     | 6,855   | 22,991   | 2.9                            |
| 99–100.....       | 0.268499  | 5,884                       | 1,580                                     | 5,094   | 16,136   | 2.7                            |
| 100 and over..... | 1.000000  | 4,304                       | 4,304                                     | 11,042  | 11,042   | 2.6                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 11. Life table for Hispanic males: United States, 2017**

Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table11.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table11.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.005387  | 100,000                     | 539                                       | 99,525  | 7,909,651  | 79.1                           |
| 1-2.....    | 0.000317  | 99,461                      | 32  | 99,445  | 7,810,126  | 78.5                           |
| 2-3.....    | 0.000206  | 99,430                      | 20  | 99,420  | 7,710,681  | 77.5                           |
| 3-4.....    | 0.000193  | 99,409                      | 19  | 99,400  | 7,611,261  | 76.6                           |
| 4-5.....    | 0.000113  | 99,390                      | 11  | 99,384  | 7,511,862  | 75.6                           |
| 5-6.....    | 0.000122  | 99,379                      | 12  | 99,373  | 7,412,477  | 74.6                           |
| 6-7.....    | 0.000111  | 99,367                      | 11  | 99,361  | 7,313,104  | 73.6                           |
| 7-8.....    | 0.000102  | 99,356                      | 10  | 99,351  | 7,213,743  | 72.6                           |
| 8-9.....    | 0.000092  | 99,346                      | 9   | 99,341  | 7,114,393  | 71.6                           |
| 9-10.....   | 0.000082  | 99,337                      | 8   | 99,332  | 7,015,051  | 70.6                           |
| 10-11.....  | 0.000077  | 99,328                      | 8   | 99,325  | 6,915,719  | 69.6                           |
| 11-12.....  | 0.000085  | 99,321                      | 8   | 99,317  | 6,816,394  | 68.6                           |
| 12-13.....  | 0.000118  | 99,312                      | 12  | 99,307  | 6,717,078  | 67.6                           |
| 13-14.....  | 0.000181  | 99,301                      | 18  | 99,292  | 6,617,771  | 66.6                           |
| 14-15.....  | 0.000269  | 99,283                      | 27  | 99,269  | 6,518,479  | 65.7                           |
| 15-16.....  | 0.000369  | 99,256                      | 37  | 99,238  | 6,419,210  | 64.7                           |
| 16-17.....  | 0.000471  | 99,219                      | 47  | 99,196  | 6,319,972  | 63.7                           |
| 17-18.....  | 0.000578  | 99,173                      | 57  | 99,144  | 6,220,776  | 62.7                           |
| 18-19.....  | 0.000684  | 99,115                      | 68  | 99,081  | 6,121,632  | 61.8                           |
| 19-20.....  | 0.000786  | 99,048                      | 78  | 99,009  | 6,022,551  | 60.8                           |
| 20-21.....  | 0.000888  | 98,970                      | 88  | 98,926  | 5,923,542  | 59.9                           |
| 21-22.....  | 0.000987  | 98,882                      | 98  | 98,833  | 5,824,616  | 58.9                           |
| 22-23.....  | 0.001074  | 98,784                      | 106                                       | 98,731  | 5,725,783  | 58.0                           |
| 23-24.....  | 0.001145  | 98,678                      | 113                                       | 98,622  | 5,627,052  | 57.0                           |
| 24-25.....  | 0.001201  | 98,565                      | 118                                       | 98,506  | 5,528,431  | 56.1                           |
| 25-26.....  | 0.001254  | 98,447                      | 123                                       | 98,385  | 5,429,925  | 55.2                           |
| 26-27.....  | 0.001303  | 98,323                      | 128                                       | 98,259  | 5,331,540  | 54.2                           |
| 27-28.....  | 0.001334  | 98,195                      | 131                                       | 98,130  | 5,233,281  | 53.3                           |
| 28-29.....  | 0.001347  | 98,064                      | 132                                       | 97,998  | 5,135,151  | 52.4                           |
| 29-30.....  | 0.001346  | 97,932                      | 132                                       | 97,866  | 5,037,153  | 51.4                           |
| 30-31.....  | 0.001336  | 97,800                      | 131                                       | 97,735  | 4,939,287  | 50.5                           |
| 31-32.....  | 0.001331  | 97,670                      | 130                                       | 97,605  | 4,841,552  | 49.6                           |
| 32-33.....  | 0.001344  | 97,540                      | 131                                       | 97,474  | 4,743,948  | 48.6                           |
| 33-34.....  | 0.001384  | 97,408                      | 135                                       | 97,341  | 4,646,474  | 47.7                           |
| 34-35.....  | 0.001444  | 97,274                      | 140                                       | 97,203  | 4,549,133  | 46.8                           |
| 35-36.....  | 0.001515  | 97,133                      | 147                                       | 97,060  | 4,451,929  | 45.8                           |
| 36-37.....  | 0.001584  | 96,986                      | 154                                       | 96,909  | 4,354,870  | 44.9                           |
| 37-38.....  | 0.001646  | 96,833                      | 159                                       | 96,753  | 4,257,960  | 44.0                           |
| 38-39.....  | 0.001697  | 96,673                      | 164                                       | 96,591  | 4,161,207  | 43.0                           |
| 39-40.....  | 0.001744  | 96,509                      | 168                                       | 96,425  | 4,064,616  | 42.1                           |
| 40-41.....  | 0.001798  | 96,341                      | 173                                       | 96,254  | 3,968,191  | 41.2                           |
| 41-42.....  | 0.001871  | 96,168                      | 180                                       | 96,078  | 3,871,937  | 40.3                           |
| 42-43.....  | 0.001964  | 95,988                      | 189                                       | 95,893  | 3,775,859  | 39.3                           |
| 43-44.....  | 0.002081  | 95,799                      | 199                                       | 95,699  | 3,679,966  | 38.4                           |
| 44-45.....  | 0.002222  | 95,600                      | 212                                       | 95,494  | 3,584,267  | 37.5                           |
| 45-46.....  | 0.002373  | 95,387                      | 226                                       | 95,274  | 3,488,773  | 36.6                           |
| 46-47.....  | 0.002543  | 95,161                      | 242                                       | 95,040  | 3,393,499  | 35.7                           |
| 47-48.....  | 0.002763  | 94,919                      | 262                                       | 94,788  | 3,298,459  | 34.8                           |
| 48-49.....  | 0.003049  | 94,657                      | 289                                       | 94,512  | 3,203,671  | 33.8                           |
| 49-50.....  | 0.003393  | 94,368                      | 320                                       | 94,208  | 3,109,159  | 32.9                           |
| 50-51.....  | 0.003780  | 94,048                      | 356                                       | 93,870  | 3,014,951  | 32.1                           |
| 51-52.....  | 0.004184  | 93,692                      | 392                                       | 93,496  | 2,921,081  | 31.2                           |
| 52-53.....  | 0.004590  | 93,300                      | 428                                       | 93,086  | 2,827,584  | 30.3                           |
| 53-54.....  | 0.004979  | 92,872                      | 462                                       | 92,641  | 2,734,498  | 29.4                           |
| 54-55.....  | 0.005364  | 92,410                      | 496                                       | 92,162  | 2,641,857  | 28.6                           |
| 55-56.....  | 0.005761  | 91,914                      | 530                                       | 91,649  | 2,549,695  | 27.7                           |
| 56-57.....  | 0.006203  | 91,384                      | 567                                       | 91,101  | 2,458,046  | 26.9                           |
| 57-58.....  | 0.006711  | 90,818                      | 609                                       | 90,513  | 2,366,945  | 26.1                           |
| 58-59.....  | 0.007311  | 90,208                      | 660                                       | 89,878  | 2,276,432  | 25.2                           |
| 59-60.....  | 0.007999  | 89,549                      | 716                                       | 89,190  | 2,186,554  | 24.4                           |
| 60-61.....  | 0.008775  | 88,832                      | 779                                       | 88,443  | 2,097,363  | 23.6                           |

See footnotes at end of table.

**Table 11. Life table for Hispanic males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table11.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table11.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.009595  | 88,053                      | 845                                       | 87,630  | 2,008,921  | 22.8                           |
| 62–63.....        | 0.010403  | 87,208                      | 907                                       | 86,754  | 1,921,290  | 22.0                           |
| 63–64.....        | 0.011144  | 86,301                      | 962                                       | 85,820  | 1,834,536  | 21.3                           |
| 64–65.....        | 0.011838  | 85,339                      | 1,010                                     | 84,834  | 1,748,716  | 20.5                           |
| 65–66.....        | 0.012554  | 84,329                      | 1,059                                     | 83,800  | 1,663,882  | 19.7                           |
| 66–67.....        | 0.013367  | 83,270                      | 1,113                                     | 82,714  | 1,580,082  | 19.0                           |
| 67–68.....        | 0.014291  | 82,157                      | 1,174                                     | 81,570  | 1,497,369  | 18.2                           |
| 68–69.....        | 0.015373  | 80,983                      | 1,245                                     | 80,361  | 1,415,799  | 17.5                           |
| 69–70.....        | 0.016623  | 79,738                      | 1,325                                     | 79,075  | 1,335,438  | 16.7                           |
| 70–71.....        | 0.018020  | 78,413                      | 1,413                                     | 77,706  | 1,256,363  | 16.0                           |
| 71–72.....        | 0.019554  | 77,000                      | 1,506                                     | 76,247  | 1,178,657  | 15.3                           |
| 72–73.....        | 0.021258  | 75,494                      | 1,605                                     | 74,692  | 1,102,410  | 14.6                           |
| 73–74.....        | 0.023142  | 73,889                      | 1,710                                     | 73,034  | 1,027,719  | 13.9                           |
| 74–75.....        | 0.025233  | 72,179                      | 1,821                                     | 71,268  | 954,685  | 13.2                           |
| 75–76.....        | 0.027550  | 70,358                      | 1,938                                     | 69,389  | 883,416  | 12.6                           |
| 76–77.....        | 0.030165  | 68,419                      | 2,064                                     | 67,388  | 814,027  | 11.9                           |
| 77–78.....        | 0.033304  | 66,356                      | 2,210                                     | 65,251  | 746,640  | 11.3                           |
| 78–79.....        | 0.036803  | 64,146                      | 2,361                                     | 62,965  | 681,389  | 10.6                           |
| 79–80.....        | 0.040844  | 61,785                      | 2,524                                     | 60,523  | 618,424  | 10.0                           |
| 80–81.....        | 0.045361  | 59,261                      | 2,688                                     | 57,917  | 557,901  | 9.4                            |
| 81–82.....        | 0.050408  | 56,573                      | 2,852                                     | 55,147  | 499,983  | 8.8                            |
| 82–83.....        | 0.056135  | 53,722                      | 3,016                                     | 52,214  | 444,836  | 8.3                            |
| 83–84.....        | 0.062884  | 50,706                      | 3,189                                     | 49,112  | 392,622  | 7.7                            |
| 84–85.....        | 0.070055  | 47,517                      | 3,329                                     | 45,853  | 343,510  | 7.2                            |
| 85–86.....        | 0.078199  | 44,188                      | 3,456                                     | 42,461  | 297,658  | 6.7                            |
| 86–87.....        | 0.086479  | 40,733                      | 3,523                                     | 38,972  | 255,197  | 6.3                            |
| 87–88.....        | 0.097531  | 37,210                      | 3,629                                     | 35,396  | 216,225  | 5.8                            |
| 88–89.....        | 0.109702  | 33,581                      | 3,684                                     | 31,739  | 180,829  | 5.4                            |
| 89–90.....        | 0.123030  | 29,897                      | 3,678                                     | 28,058  | 149,090  | 5.0                            |
| 90–91.....        | 0.137538  | 26,219                      | 3,606                                     | 24,416  | 121,032  | 4.6                            |
| 91–92.....        | 0.153223  | 22,613                      | 3,465                                     | 20,881  | 96,616   | 4.3                            |
| 92–93.....        | 0.170062  | 19,148                      | 3,256                                     | 17,520  | 75,735   | 4.0                            |
| 93–94.....        | 0.187999  | 15,892                      | 2,988                                     | 14,398  | 58,215   | 3.7                            |
| 94–95.....        | 0.206950  | 12,904                      | 2,671                                     | 11,569  | 43,817   | 3.4                            |
| 95–96.....        | 0.226800  | 10,234                      | 2,321                                     | 9,073   | 32,248   | 3.2                            |
| 96–97.....        | 0.247404  | 7,913                       | 1,958                                     | 6,934   | 23,175   | 2.9                            |
| 97–98.....        | 0.268590  | 5,955                       | 1,599                                     | 5,155   | 16,241   | 2.7                            |
| 98–99.....        | 0.290167  | 4,356                       | 1,264                                     | 3,724   | 11,086   | 2.5                            |
| 99–100.....       | 0.311925  | 3,092                       | 964                                       | 2,610   | 7,362  | 2.4                            |
| 100 and over..... | 1.000000  | 2,127                       | 2,127                                     | 4,753   | 4,753  | 2.2                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 12. Life table for Hispanic females: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table12.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table12.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.004774  | 100,000                     | 477                                       | 99,575  | 8,430,736  | 84.3                           |
| 1-2.....    | 0.000302  | 99,523                      | 30  | 99,508  | 8,331,161  | 83.7                           |
| 2-3.....    | 0.000161  | 99,493                      | 16  | 99,485  | 8,231,654  | 82.7                           |
| 3-4.....    | 0.000126  | 99,477                      | 13  | 99,470  | 8,132,169  | 81.7                           |
| 4-5.....    | 0.000099  | 99,464                      | 10  | 99,459  | 8,032,699  | 80.8                           |
| 5-6.....    | 0.000103  | 99,454                      | 10  | 99,449  | 7,933,240  | 79.8                           |
| 6-7.....    | 0.000099  | 99,444                      | 10  | 99,439  | 7,833,791  | 78.8                           |
| 7-8.....    | 0.000094  | 99,434                      | 9   | 99,429  | 7,734,352  | 77.8                           |
| 8-9.....    | 0.000087  | 99,425                      | 9   | 99,420  | 7,634,923  | 76.8                           |
| 9-10.....   | 0.000079  | 99,416                      | 8   | 99,412  | 7,535,502  | 75.8                           |
| 10-11.....  | 0.000072  | 99,408                      | 7   | 99,405  | 7,436,090  | 74.8                           |
| 11-12.....  | 0.000071  | 99,401                      | 7   | 99,397  | 7,336,686  | 73.8                           |
| 12-13.....  | 0.000083  | 99,394                      | 8   | 99,390  | 7,237,288  | 72.8                           |
| 13-14.....  | 0.000112  | 99,386                      | 11  | 99,380  | 7,137,898  | 71.8                           |
| 14-15.....  | 0.000154  | 99,374                      | 15  | 99,367  | 7,038,518  | 70.8                           |
| 15-16.....  | 0.000203  | 99,359                      | 20  | 99,349  | 6,939,152  | 69.8                           |
| 16-17.....  | 0.000250  | 99,339                      | 25  | 99,327  | 6,839,802  | 68.9                           |
| 17-18.....  | 0.000289  | 99,314                      | 29  | 99,300  | 6,740,476  | 67.9                           |
| 18-19.....  | 0.000317  | 99,285                      | 31  | 99,270  | 6,641,176  | 66.9                           |
| 19-20.....  | 0.000334  | 99,254                      | 33  | 99,237  | 6,541,906  | 65.9                           |
| 20-21.....  | 0.000350  | 99,221                      | 35  | 99,204  | 6,442,669  | 64.9                           |
| 21-22.....  | 0.000368  | 99,186                      | 37  | 99,168  | 6,343,465  | 64.0                           |
| 22-23.....  | 0.000384  | 99,150                      | 38  | 99,131  | 6,244,297  | 63.0                           |
| 23-24.....  | 0.000395  | 99,112                      | 39  | 99,092  | 6,145,167  | 62.0                           |
| 24-25.....  | 0.000405  | 99,072                      | 40  | 99,052  | 6,046,075  | 61.0                           |
| 25-26.....  | 0.000413  | 99,032                      | 41  | 99,012  | 5,947,023  | 60.1                           |
| 26-27.....  | 0.000422  | 98,991                      | 42  | 98,970  | 5,848,011  | 59.1                           |
| 27-28.....  | 0.000436  | 98,950                      | 43  | 98,928  | 5,749,040  | 58.1                           |
| 28-29.....  | 0.000456  | 98,906                      | 45  | 98,884  | 5,650,112  | 57.1                           |
| 29-30.....  | 0.000483  | 98,861                      | 48  | 98,837  | 5,551,229  | 56.2                           |
| 30-31.....  | 0.000514  | 98,814                      | 51  | 98,788  | 5,452,391  | 55.2                           |
| 31-32.....  | 0.000545  | 98,763                      | 54  | 98,736  | 5,353,603  | 54.2                           |
| 32-33.....  | 0.000574  | 98,709                      | 57  | 98,681  | 5,254,867  | 53.2                           |
| 33-34.....  | 0.000599  | 98,652                      | 59  | 98,623  | 5,156,187  | 52.3                           |
| 34-35.....  | 0.000621  | 98,593                      | 61  | 98,563  | 5,057,564  | 51.3                           |
| 35-36.....  | 0.000647  | 98,532                      | 64  | 98,500  | 4,959,001  | 50.3                           |
| 36-37.....  | 0.000677  | 98,468                      | 67  | 98,435  | 4,860,501  | 49.4                           |
| 37-38.....  | 0.000707  | 98,402                      | 70  | 98,367  | 4,762,066  | 48.4                           |
| 38-39.....  | 0.000737  | 98,332                      | 73  | 98,296  | 4,663,699  | 47.4                           |
| 39-40.....  | 0.000771  | 98,259                      | 76  | 98,222  | 4,565,403  | 46.5                           |
| 40-41.....  | 0.000806  | 98,184                      | 79  | 98,144  | 4,467,182  | 45.5                           |
| 41-42.....  | 0.000852  | 98,105                      | 84  | 98,063  | 4,369,038  | 44.5                           |
| 42-43.....  | 0.000923  | 98,021                      | 90  | 97,976  | 4,270,975  | 43.6                           |
| 43-44.....  | 0.001025  | 97,931                      | 100                                       | 97,880  | 4,172,999  | 42.6                           |
| 44-45.....  | 0.001154  | 97,830                      | 113                                       | 97,774  | 4,075,119  | 41.7                           |
| 45-46.....  | 0.001299  | 97,717                      | 127                                       | 97,654  | 3,977,345  | 40.7                           |
| 46-47.....  | 0.001449  | 97,590                      | 141                                       | 97,520  | 3,879,691  | 39.8                           |
| 47-48.....  | 0.001602  | 97,449                      | 156                                       | 97,371  | 3,782,172  | 38.8                           |
| 48-49.....  | 0.001757  | 97,293                      | 171                                       | 97,207  | 3,684,801  | 37.9                           |
| 49-50.....  | 0.001915  | 97,122                      | 186                                       | 97,029  | 3,587,594  | 36.9                           |
| 50-51.....  | 0.002089  | 96,936                      | 202                                       | 96,835  | 3,490,565  | 36.0                           |
| 51-52.....  | 0.002279  | 96,733                      | 220                                       | 96,623  | 3,393,730  | 35.1                           |
| 52-53.....  | 0.002477  | 96,513                      | 239                                       | 96,393  | 3,297,107  | 34.2                           |
| 53-54.....  | 0.002681  | 96,274                      | 258                                       | 96,145  | 3,200,714  | 33.2                           |
| 54-55.....  | 0.002894  | 96,016                      | 278                                       | 95,877  | 3,104,569  | 32.3                           |
| 55-56.....  | 0.003113  | 95,738                      | 298                                       | 95,589  | 3,008,692  | 31.4                           |
| 56-57.....  | 0.003355  | 95,440                      | 320                                       | 95,280  | 2,913,103  | 30.5                           |
| 57-58.....  | 0.003648  | 95,120                      | 347                                       | 94,946  | 2,817,824  | 29.6                           |
| 58-59.....  | 0.004011  | 94,773                      | 380                                       | 94,583  | 2,722,877  | 28.7                           |
| 59-60.....  | 0.004436  | 94,393                      | 419                                       | 94,183  | 2,628,295  | 27.8                           |
| 60-61.....  | 0.004920  | 93,974                      | 462                                       | 93,743  | 2,534,111  | 27.0                           |

See footnotes at end of table.



**Table 12. Life table for Hispanic females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table12.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table12.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.005425  | 93,512                      | 507                                       | 93,258  | 2,440,369  | 26.1                           |
| 62–63.....        | 0.005918  | 93,004                      | 550                                       | 92,729  | 2,347,111  | 25.2                           |
| 63–64.....        | 0.006368  | 92,454                      | 589                                       | 92,159  | 2,254,382  | 24.4                           |
| 64–65.....        | 0.006795  | 91,865                      | 624                                       | 91,553  | 2,162,222  | 23.5                           |
| 65–66.....        | 0.007248  | 91,241                      | 661                                       | 90,910  | 2,070,669  | 22.7                           |
| 66–67.....        | 0.007776  | 90,580                      | 704                                       | 90,227  | 1,979,759  | 21.9                           |
| 67–68.....        | 0.008380  | 89,875                      | 753                                       | 89,499  | 1,889,532  | 21.0                           |
| 68–69.....        | 0.009085  | 89,122                      | 810                                       | 88,717  | 1,800,033  | 20.2                           |
| 69–70.....        | 0.009898  | 88,312                      | 874                                       | 87,875  | 1,711,316  | 19.4                           |
| 70–71.....        | 0.010815  | 87,438                      | 946                                       | 86,965  | 1,623,440  | 18.6                           |
| 71–72.....        | 0.011844  | 86,493                      | 1,024                                     | 85,980  | 1,536,475  | 17.8                           |
| 72–73.....        | 0.013022  | 85,468                      | 1,113                                     | 84,912  | 1,450,494  | 17.0                           |
| 73–74.....        | 0.014375  | 84,355                      | 1,213                                     | 83,749  | 1,365,583  | 16.2                           |
| 74–75.....        | 0.015930  | 83,143                      | 1,324                                     | 82,480  | 1,281,834  | 15.4                           |
| 75–76.....        | 0.017681  | 81,818                      | 1,447                                     | 81,095  | 1,199,354  | 14.7                           |
| 76–77.....        | 0.019721  | 80,371                      | 1,585                                     | 79,579  | 1,118,259  | 13.9                           |
| 77–78.....        | 0.022072  | 78,787                      | 1,739                                     | 77,917  | 1,038,680  | 13.2                           |
| 78–79.....        | 0.024839  | 77,048                      | 1,914                                     | 76,091  | 960,763  | 12.5                           |
| 79–80.....        | 0.027773  | 75,134                      | 2,087                                     | 74,090  | 884,672  | 11.8                           |
| 80–81.....        | 0.031224  | 73,047                      | 2,281                                     | 71,907  | 810,582  | 11.1                           |
| 81–82.....        | 0.034877  | 70,766                      | 2,468                                     | 69,532  | 738,675  | 10.4                           |
| 82–83.....        | 0.039288  | 68,298                      | 2,683                                     | 66,956  | 669,143  | 9.8                            |
| 83–84.....        | 0.044922  | 65,615                      | 2,948                                     | 64,141  | 602,186  | 9.2                            |
| 84–85.....        | 0.050596  | 62,667                      | 3,171                                     | 61,082  | 538,045  | 8.6                            |
| 85–86.....        | 0.056531  | 59,497                      | 3,363                                     | 57,815  | 476,963  | 8.0                            |
| 86–87.....        | 0.062902  | 56,133                      | 3,531                                     | 54,368  | 419,148  | 7.5                            |
| 87–88.....        | 0.071652  | 52,602                      | 3,769                                     | 50,718  | 364,781  | 6.9                            |
| 88–89.....        | 0.081436  | 48,833                      | 3,977                                     | 46,845  | 314,063  | 6.4                            |
| 89–90.....        | 0.092327  | 44,856                      | 4,141                                     | 42,786  | 267,218  | 6.0                            |
| 90–91.....        | 0.104388  | 40,715                      | 4,250                                     | 38,590  | 224,433  | 5.5                            |
| 91–92.....        | 0.117666  | 36,465                      | 4,291                                     | 34,319  | 185,843  | 5.1                            |
| 92–93.....        | 0.132193  | 32,174                      | 4,253                                     | 30,048  | 151,523  | 4.7                            |
| 93–94.....        | 0.147978  | 27,921                      | 4,132                                     | 25,855  | 121,476  | 4.4                            |
| 94–95.....        | 0.165001  | 23,789                      | 3,925                                     | 21,827  | 95,620   | 4.0                            |
| 95–96.....        | 0.183214  | 19,864                      | 3,639                                     | 18,044  | 73,794   | 3.7                            |
| 96–97.....        | 0.202533  | 16,225                      | 3,286                                     | 14,582  | 55,749   | 3.4                            |
| 97–98.....        | 0.222840  | 12,939                      | 2,883                                     | 11,497  | 41,168   | 3.2                            |
| 98–99.....        | 0.243984  | 10,055                      | 2,453                                     | 8,829   | 29,671   | 3.0                            |
| 99–100.....       | 0.265783  | 7,602                       | 2,020                                     | 6,592   | 20,842   | 2.7                            |
| 100 and over..... | 1.000000  | 5,582                       | 5,582                                     | 14,250  | 14,250   | 2.6                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 13. Life table for the non-Hispanic white population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table13.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table13.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.004671  | 100,000                     | 467                                       | 99,590  | 7,851,964  | 78.5                           |
| 1-2.....    | 0.000344  | 99,533                      | 34  | 99,516  | 7,752,373  | 77.9                           |
| 2-3.....    | 0.000239  | 99,499                      | 24  | 99,487  | 7,652,858  | 76.9                           |
| 3-4.....    | 0.000173  | 99,475                      | 17  | 99,466  | 7,553,371  | 75.9                           |
| 4-5.....    | 0.000137  | 99,458                      | 14  | 99,451  | 7,453,904  | 74.9                           |
| 5-6.....    | 0.000129  | 99,444                      | 13  | 99,438  | 7,354,453  | 74.0                           |
| 6-7.....    | 0.000114  | 99,431                      | 11  | 99,426  | 7,255,016  | 73.0                           |
| 7-8.....    | 0.000102  | 99,420                      | 10  | 99,415  | 7,155,590  | 72.0                           |
| 8-9.....    | 0.000093  | 99,410                      | 9   | 99,405  | 7,056,175  | 71.0                           |
| 9-10.....   | 0.000088  | 99,401                      | 9   | 99,396  | 6,956,770  | 70.0                           |
| 10-11.....  | 0.000089  | 99,392                      | 9   | 99,387  | 6,857,374  | 69.0                           |
| 11-12.....  | 0.000101  | 99,383                      | 10  | 99,378  | 6,757,986  | 68.0                           |
| 12-13.....  | 0.000130  | 99,373                      | 13  | 99,367  | 6,658,608  | 67.0                           |
| 13-14.....  | 0.000178  | 99,360                      | 18  | 99,351  | 6,559,242  | 66.0                           |
| 14-15.....  | 0.000242  | 99,342                      | 24  | 99,330  | 6,459,890  | 65.0                           |
| 15-16.....  | 0.000312  | 99,318                      | 31  | 99,303  | 6,360,560  | 64.0                           |
| 16-17.....  | 0.000387  | 99,287                      | 38  | 99,268  | 6,261,257  | 63.1                           |
| 17-18.....  | 0.000470  | 99,249                      | 47  | 99,226  | 6,161,989  | 62.1                           |
| 18-19.....  | 0.000564  | 99,202                      | 56  | 99,174  | 6,062,764  | 61.1                           |
| 19-20.....  | 0.000663  | 99,146                      | 66  | 99,113  | 5,963,590  | 60.1                           |
| 20-21.....  | 0.000766  | 99,080                      | 76  | 99,043  | 5,864,476  | 59.2                           |
| 21-22.....  | 0.000867  | 99,005                      | 86  | 98,962  | 5,765,434  | 58.2                           |
| 22-23.....  | 0.000959  | 98,919                      | 95  | 98,871  | 5,666,472  | 57.3                           |
| 23-24.....  | 0.001036  | 98,824                      | 102                                       | 98,773  | 5,567,601  | 56.3                           |
| 24-25.....  | 0.001101  | 98,722                      | 109                                       | 98,667  | 5,468,828  | 55.4                           |
| 25-26.....  | 0.001160  | 98,613                      | 114                                       | 98,556  | 5,370,161  | 54.5                           |
| 26-27.....  | 0.001220  | 98,499                      | 120                                       | 98,438  | 5,271,605  | 53.5                           |
| 27-28.....  | 0.001279  | 98,378                      | 126                                       | 98,315  | 5,173,166  | 52.6                           |
| 28-29.....  | 0.001340  | 98,253                      | 132                                       | 98,187  | 5,074,851  | 51.7                           |
| 29-30.....  | 0.001406  | 98,121                      | 138                                       | 98,052  | 4,976,664  | 50.7                           |
| 30-31.....  | 0.001474  | 97,983                      | 144                                       | 97,911  | 4,878,612  | 49.8                           |
| 31-32.....  | 0.001542  | 97,839                      | 151                                       | 97,763  | 4,780,702  | 48.9                           |
| 32-33.....  | 0.001604  | 97,688                      | 157                                       | 97,609  | 4,682,939  | 47.9                           |
| 33-34.....  | 0.001657  | 97,531                      | 162                                       | 97,450  | 4,585,329  | 47.0                           |
| 34-35.....  | 0.001702  | 97,369                      | 166                                       | 97,286  | 4,487,879  | 46.1                           |
| 35-36.....  | 0.001754  | 97,204                      | 170                                       | 97,118  | 4,390,593  | 45.2                           |
| 36-37.....  | 0.001812  | 97,033                      | 176                                       | 96,945  | 4,293,474  | 44.2                           |
| 37-38.....  | 0.001870  | 96,857                      | 181                                       | 96,767  | 4,196,529  | 43.3                           |
| 38-39.....  | 0.001927  | 96,676                      | 186                                       | 96,583  | 4,099,762  | 42.4                           |
| 39-40.....  | 0.001992  | 96,490                      | 192                                       | 96,394  | 4,003,179  | 41.5                           |
| 40-41.....  | 0.002076  | 96,298                      | 200                                       | 96,198  | 3,906,786  | 40.6                           |
| 41-42.....  | 0.002185  | 96,098                      | 210                                       | 95,993  | 3,810,588  | 39.7                           |
| 42-43.....  | 0.002315  | 95,888                      | 222                                       | 95,777  | 3,714,595  | 38.7                           |
| 43-44.....  | 0.002458  | 95,666                      | 235                                       | 95,548  | 3,618,818  | 37.8                           |
| 44-45.....  | 0.002613  | 95,431                      | 249                                       | 95,306  | 3,523,270  | 36.9                           |
| 45-46.....  | 0.002780  | 95,181                      | 265                                       | 95,049  | 3,427,964  | 36.0                           |
| 46-47.....  | 0.002969  | 94,917                      | 282                                       | 94,776  | 3,332,915  | 35.1                           |
| 47-48.....  | 0.003194  | 94,635                      | 302                                       | 94,484  | 3,238,140  | 34.2                           |
| 48-49.....  | 0.003467  | 94,333                      | 327                                       | 94,169  | 3,143,656  | 33.3                           |
| 49-50.....  | 0.003788  | 94,006                      | 356                                       | 93,828  | 3,049,487  | 32.4                           |
| 50-51.....  | 0.004129  | 93,649                      | 387                                       | 93,456  | 2,955,659  | 31.6                           |
| 51-52.....  | 0.004492  | 93,263                      | 419                                       | 93,053  | 2,862,203  | 30.7                           |
| 52-53.....  | 0.004908  | 92,844                      | 456                                       | 92,616  | 2,769,150  | 29.8                           |
| 53-54.....  | 0.005373  | 92,388                      | 496                                       | 92,140  | 2,676,534  | 29.0                           |
| 54-55.....  | 0.005864  | 91,892                      | 539                                       | 91,622  | 2,584,394  | 28.1                           |
| 55-56.....  | 0.006363  | 91,353                      | 581                                       | 91,062  | 2,492,772  | 27.3                           |
| 56-57.....  | 0.006859  | 90,772                      | 623                                       | 90,460  | 2,401,709  | 26.5                           |
| 57-58.....  | 0.007361  | 90,149                      | 664                                       | 89,817  | 2,311,249  | 25.6                           |
| 58-59.....  | 0.007881  | 89,485                      | 705                                       | 89,133  | 2,221,432  | 24.8                           |
| 59-60.....  | 0.008434  | 88,780                      | 749                                       | 88,406  | 2,132,299  | 24.0                           |
| 60-61.....  | 0.009037  | 88,032                      | 796                                       | 87,634  | 2,043,893  | 23.2                           |

See footnotes at end of table.

**Table 13. Life table for the non-Hispanic white population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table13.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table13.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.009682  | 87,236                      | 845                                       | 86,814  | 1,956,259  | 22.4                           |
| 62–63.....        | 0.010352  | 86,391                      | 894                                       | 85,944  | 1,869,445  | 21.6                           |
| 63–64.....        | 0.011039  | 85,497                      | 944                                       | 85,025  | 1,783,501  | 20.9                           |
| 64–65.....        | 0.011757  | 84,553                      | 994                                       | 84,056  | 1,698,476  | 20.1                           |
| 65–66.....        | 0.012517  | 83,559                      | 1,046                                     | 83,036  | 1,614,420  | 19.3                           |
| 66–67.....        | 0.013406  | 82,513                      | 1,106                                     | 81,960  | 1,531,384  | 18.6                           |
| 67–68.....        | 0.014422  | 81,407                      | 1,174                                     | 80,820  | 1,449,423  | 17.8                           |
| 68–69.....        | 0.015627  | 80,233                      | 1,254                                     | 79,606  | 1,368,603  | 17.1                           |
| 69–70.....        | 0.017055  | 78,979                      | 1,347                                     | 78,306  | 1,288,997  | 16.3                           |
| 70–71.....        | 0.018465  | 77,632                      | 1,433                                     | 76,915  | 1,210,692  | 15.6                           |
| 71–72.....        | 0.020450  | 76,199                      | 1,558                                     | 75,420  | 1,133,776  | 14.9                           |
| 72–73.....        | 0.022267  | 74,640                      | 1,662                                     | 73,809  | 1,058,357  | 14.2                           |
| 73–74.....        | 0.024381  | 72,978                      | 1,779                                     | 72,089  | 984,547  | 13.5                           |
| 74–75.....        | 0.026555  | 71,199                      | 1,891                                     | 70,254  | 912,458  | 12.8                           |
| 75–76.....        | 0.029340  | 69,308                      | 2,034                                     | 68,292  | 842,204  | 12.2                           |
| 76–77.....        | 0.032400  | 67,275                      | 2,180                                     | 66,185  | 773,913  | 11.5                           |
| 77–78.....        | 0.035929  | 65,095                      | 2,339                                     | 63,926  | 707,728  | 10.9                           |
| 78–79.....        | 0.039801  | 62,756                      | 2,498                                     | 61,508  | 643,802  | 10.3                           |
| 79–80.....        | 0.043997  | 60,259                      | 2,651                                     | 58,933  | 582,294  | 9.7                            |
| 80–81.....        | 0.048869  | 57,607                      | 2,815                                     | 56,200  | 523,361  | 9.1                            |
| 81–82.....        | 0.054019  | 54,792                      | 2,960                                     | 53,312  | 467,161  | 8.5                            |
| 82–83.....        | 0.060143  | 51,832                      | 3,117                                     | 50,274  | 413,849  | 8.0                            |
| 83–84.....        | 0.067643  | 48,715                      | 3,295                                     | 47,067  | 363,575  | 7.5                            |
| 84–85.....        | 0.075294  | 45,420                      | 3,420                                     | 43,710  | 316,508  | 7.0                            |
| 85–86.....        | 0.083530  | 42,000                      | 3,508                                     | 40,246  | 272,798  | 6.5                            |
| 86–87.....        | 0.092160  | 38,492                      | 3,547                                     | 36,718  | 232,552  | 6.0                            |
| 87–88.....        | 0.103553  | 34,944                      | 3,619                                     | 33,135  | 195,834  | 5.6                            |
| 88–89.....        | 0.116069  | 31,326                      | 3,636                                     | 29,508  | 162,699  | 5.2                            |
| 89–90.....        | 0.129750  | 27,690                      | 3,593                                     | 25,893  | 133,191  | 4.8                            |
| 90–91.....        | 0.144619  | 24,097                      | 3,485                                     | 22,355  | 107,298  | 4.5                            |
| 91–92.....        | 0.160683  | 20,612                      | 3,312                                     | 18,956  | 84,943   | 4.1                            |
| 92–93.....        | 0.177923  | 17,300                      | 3,078                                     | 15,761  | 65,987   | 3.8                            |
| 93–94.....        | 0.196295  | 14,222                      | 2,792                                     | 12,826  | 50,226   | 3.5                            |
| 94–95.....        | 0.215726  | 11,430                      | 2,466                                     | 10,197  | 37,400   | 3.3                            |
| 95–96.....        | 0.236116  | 8,964                       | 2,117                                     | 7,906   | 27,203   | 3.0                            |
| 96–97.....        | 0.257333  | 6,848                       | 1,762                                     | 5,967   | 19,297   | 2.8                            |
| 97–98.....        | 0.279220  | 5,086                       | 1,420                                     | 4,376   | 13,330   | 2.6                            |
| 98–99.....        | 0.301597  | 3,666                       | 1,106                                     | 3,113   | 8,954  | 2.4                            |
| 99–100.....       | 0.324266  | 2,560                       | 830                                       | 2,145   | 5,841  | 2.3                            |
| 100 and over..... | 1.000000  | 1,730                       | 1,730                                     | 3,696   | 3,696  | 2.1                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 14. Life table for non-Hispanic white males: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table14.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table14.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.005168  | 100,000                     | 517                                       | 99,547  | 7,608,533  | 76.1                           |
| 1-2.....    | 0.000436  | 99,483                      | 43  | 99,462  | 7,508,986  | 75.5                           |
| 2-3.....    | 0.000319  | 99,440                      | 32  | 99,424  | 7,409,524  | 74.5                           |
| 3-4.....    | 0.000204  | 99,408                      | 20  | 99,398  | 7,310,100  | 73.5                           |
| 4-5.....    | 0.000165  | 99,388                      | 16  | 99,380  | 7,210,702  | 72.6                           |
| 5-6.....    | 0.000157  | 99,371                      | 16  | 99,364  | 7,111,322  | 71.6                           |
| 6-7.....    | 0.000135  | 99,356                      | 13  | 99,349  | 7,011,959  | 70.6                           |
| 7-8.....    | 0.000120  | 99,342                      | 12  | 99,336  | 6,912,610  | 69.6                           |
| 8-9.....    | 0.000108  | 99,331                      | 11  | 99,325  | 6,813,273  | 68.6                           |
| 9-10.....   | 0.000102  | 99,320                      | 10  | 99,315  | 6,713,948  | 67.6                           |
| 10-11.....  | 0.000105  | 99,310                      | 10  | 99,304  | 6,614,633  | 66.6                           |
| 11-12.....  | 0.000124  | 99,299                      | 12  | 99,293  | 6,515,329  | 65.6                           |
| 12-13.....  | 0.000165  | 99,287                      | 16  | 99,279  | 6,416,036  | 64.6                           |
| 13-14.....  | 0.000231  | 99,271                      | 23  | 99,259  | 6,316,757  | 63.6                           |
| 14-15.....  | 0.000319  | 99,248                      | 32  | 99,232  | 6,217,498  | 62.6                           |
| 15-16.....  | 0.000415  | 99,216                      | 41  | 99,195  | 6,118,266  | 61.7                           |
| 16-17.....  | 0.000517  | 99,175                      | 51  | 99,149  | 6,019,071  | 60.7                           |
| 17-18.....  | 0.000637  | 99,123                      | 63  | 99,092  | 5,919,922  | 59.7                           |
| 18-19.....  | 0.000774  | 99,060                      | 77  | 99,022  | 5,820,830  | 58.8                           |
| 19-20.....  | 0.000922  | 98,984                      | 91  | 98,938  | 5,721,808  | 57.8                           |
| 20-21.....  | 0.001076  | 98,892                      | 106                                       | 98,839  | 5,622,870  | 56.9                           |
| 21-22.....  | 0.001224  | 98,786                      | 121                                       | 98,726  | 5,524,031  | 55.9                           |
| 22-23.....  | 0.001356  | 98,665                      | 134                                       | 98,598  | 5,425,305  | 55.0                           |
| 23-24.....  | 0.001464  | 98,531                      | 144                                       | 98,459  | 5,326,707  | 54.1                           |
| 24-25.....  | 0.001554  | 98,387                      | 153                                       | 98,311  | 5,228,248  | 53.1                           |
| 25-26.....  | 0.001636  | 98,234                      | 161                                       | 98,154  | 5,129,937  | 52.2                           |
| 26-27.....  | 0.001715  | 98,073                      | 168                                       | 97,989  | 5,031,784  | 51.3                           |
| 27-28.....  | 0.001790  | 97,905                      | 175                                       | 97,818  | 4,933,794  | 50.4                           |
| 28-29.....  | 0.001861  | 97,730                      | 182                                       | 97,639  | 4,835,977  | 49.5                           |
| 29-30.....  | 0.001932  | 97,548                      | 188                                       | 97,454  | 4,738,337  | 48.6                           |
| 30-31.....  | 0.002004  | 97,360                      | 195                                       | 97,262  | 4,640,884  | 47.7                           |
| 31-32.....  | 0.002075  | 97,164                      | 202                                       | 97,064  | 4,543,622  | 46.8                           |
| 32-33.....  | 0.002139  | 96,963                      | 207                                       | 96,859  | 4,446,558  | 45.9                           |
| 33-34.....  | 0.002192  | 96,755                      | 212                                       | 96,649  | 4,349,699  | 45.0                           |
| 34-35.....  | 0.002239  | 96,543                      | 216                                       | 96,435  | 4,253,049  | 44.1                           |
| 35-36.....  | 0.002292  | 96,327                      | 221                                       | 96,217  | 4,156,614  | 43.2                           |
| 36-37.....  | 0.002353  | 96,106                      | 226                                       | 95,993  | 4,060,397  | 42.2                           |
| 37-38.....  | 0.002410  | 95,880                      | 231                                       | 95,765  | 3,964,404  | 41.3                           |
| 38-39.....  | 0.002464  | 95,649                      | 236                                       | 95,531  | 3,868,639  | 40.4                           |
| 39-40.....  | 0.002525  | 95,414                      | 241                                       | 95,293  | 3,773,108  | 39.5                           |
| 40-41.....  | 0.002607  | 95,173                      | 248                                       | 95,049  | 3,677,815  | 38.6                           |
| 41-42.....  | 0.002721  | 94,924                      | 258                                       | 94,795  | 3,582,766  | 37.7                           |
| 42-43.....  | 0.002862  | 94,666                      | 271                                       | 94,531  | 3,487,971  | 36.8                           |
| 43-44.....  | 0.003024  | 94,395                      | 285                                       | 94,252  | 3,393,440  | 35.9                           |
| 44-45.....  | 0.003204  | 94,110                      | 302                                       | 93,959  | 3,299,188  | 35.1                           |
| 45-46.....  | 0.003400  | 93,808                      | 319                                       | 93,649  | 3,205,229  | 34.2                           |
| 46-47.....  | 0.003625  | 93,489                      | 339                                       | 93,320  | 3,111,580  | 33.3                           |
| 47-48.....  | 0.003896  | 93,150                      | 363                                       | 92,969  | 3,018,260  | 32.4                           |
| 48-49.....  | 0.004229  | 92,788                      | 392                                       | 92,591  | 2,925,291  | 31.5                           |
| 49-50.....  | 0.004624  | 92,395                      | 427                                       | 92,182  | 2,832,700  | 30.7                           |
| 50-51.....  | 0.005046  | 91,968                      | 464                                       | 91,736  | 2,740,518  | 29.8                           |
| 51-52.....  | 0.005497  | 91,504                      | 503                                       | 91,252  | 2,648,782  | 28.9                           |
| 52-53.....  | 0.006017  | 91,001                      | 548                                       | 90,727  | 2,557,530  | 28.1                           |
| 53-54.....  | 0.006601  | 90,453                      | 597                                       | 90,155  | 2,466,803  | 27.3                           |
| 54-55.....  | 0.007220  | 89,856                      | 649                                       | 89,532  | 2,376,648  | 26.4                           |
| 55-56.....  | 0.007844  | 89,207                      | 700                                       | 88,857  | 2,287,117  | 25.6                           |
| 56-57.....  | 0.008465  | 88,508                      | 749                                       | 88,133  | 2,198,259  | 24.8                           |
| 57-58.....  | 0.009105  | 87,758                      | 799                                       | 87,359  | 2,110,126  | 24.0                           |
| 58-59.....  | 0.009785  | 86,959                      | 851                                       | 86,534  | 2,022,767  | 23.3                           |
| 59-60.....  | 0.010517  | 86,108                      | 906                                       | 85,656  | 1,936,233  | 22.5                           |
| 60-61.....  | 0.011317  | 85,203                      | 964                                       | 84,721  | 1,850,578  | 21.7                           |

See footnotes at end of table.

**Table 14. Life table for non-Hispanic white males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table14.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table14.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.012157  | 84,239                      | 1,024                                     | 83,727  | 1,765,857  | 21.0                           |
| 62–63.....        | 0.013005  | 83,215                      | 1,082                                     | 82,673  | 1,682,130  | 20.2                           |
| 63–64.....        | 0.013837  | 82,132                      | 1,136                                     | 81,564  | 1,599,457  | 19.5                           |
| 64–65.....        | 0.014674  | 80,996                      | 1,189                                     | 80,402  | 1,517,893  | 18.7                           |
| 65–66.....        | 0.015549  | 79,807                      | 1,241                                     | 79,187  | 1,437,491  | 18.0                           |
| 66–67.....        | 0.016597  | 78,566                      | 1,304                                     | 77,914  | 1,358,304  | 17.3                           |
| 67–68.....        | 0.017770  | 77,262                      | 1,373                                     | 76,576  | 1,280,390  | 16.6                           |
| 68–69.....        | 0.019113  | 75,890                      | 1,450                                     | 75,164  | 1,203,814  | 15.9                           |
| 69–70.....        | 0.020735  | 74,439                      | 1,544                                     | 73,667  | 1,128,650  | 15.2                           |
| 70–71.....        | 0.022262  | 72,896                      | 1,623                                     | 72,084  | 1,054,982  | 14.5                           |
| 71–72.....        | 0.024516  | 71,273                      | 1,747                                     | 70,399  | 982,898  | 13.8                           |
| 72–73.....        | 0.026511  | 69,525                      | 1,843                                     | 68,604  | 912,499  | 13.1                           |
| 73–74.....        | 0.028989  | 67,682                      | 1,962                                     | 66,701  | 843,895  | 12.5                           |
| 74–75.....        | 0.031512  | 65,720                      | 2,071                                     | 64,685  | 777,194  | 11.8                           |
| 75–76.....        | 0.034727  | 63,649                      | 2,210                                     | 62,544  | 712,510  | 11.2                           |
| 76–77.....        | 0.038315  | 61,439                      | 2,354                                     | 60,262  | 649,966  | 10.6                           |
| 77–78.....        | 0.042619  | 59,085                      | 2,518                                     | 57,826  | 589,704  | 10.0                           |
| 78–79.....        | 0.046908  | 56,567                      | 2,653                                     | 55,240  | 531,878  | 9.4                            |
| 79–80.....        | 0.051904  | 53,913                      | 2,798                                     | 52,514  | 476,638  | 8.8                            |
| 80–81.....        | 0.057383  | 51,115                      | 2,933                                     | 49,648  | 424,124  | 8.3                            |
| 81–82.....        | 0.063313  | 48,182                      | 3,051                                     | 46,657  | 374,476  | 7.8                            |
| 82–83.....        | 0.070328  | 45,131                      | 3,174                                     | 43,544  | 327,819  | 7.3                            |
| 83–84.....        | 0.078560  | 41,957                      | 3,296                                     | 40,309  | 284,275  | 6.8                            |
| 84–85.....        | 0.087267  | 38,661                      | 3,374                                     | 36,974  | 243,966  | 6.3                            |
| 85–86.....        | 0.097106  | 35,287                      | 3,427                                     | 33,574  | 206,992  | 5.9                            |
| 86–87.....        | 0.107057  | 31,861                      | 3,411                                     | 30,155  | 173,418  | 5.4                            |
| 87–88.....        | 0.120262  | 28,450                      | 3,421                                     | 26,739  | 143,263  | 5.0                            |
| 88–89.....        | 0.134704  | 25,028                      | 3,371                                     | 23,343  | 116,524  | 4.7                            |
| 89–90.....        | 0.150403  | 21,657                      | 3,257                                     | 20,028  | 93,181   | 4.3                            |
| 90–91.....        | 0.167356  | 18,400                      | 3,079                                     | 16,860  | 73,153   | 4.0                            |
| 91–92.....        | 0.185533  | 15,320                      | 2,842                                     | 13,899  | 56,293   | 3.7                            |
| 92–93.....        | 0.204874  | 12,478                      | 2,556                                     | 11,200  | 42,394   | 3.4                            |
| 93–94.....        | 0.225287  | 9,922                       | 2,235                                     | 8,804   | 31,194   | 3.1                            |
| 94–95.....        | 0.246647  | 7,686                       | 1,896                                     | 6,738   | 22,390   | 2.9                            |
| 95–96.....        | 0.268800  | 5,791                       | 1,556                                     | 5,012   | 15,652   | 2.7                            |
| 96–97.....        | 0.291561  | 4,234                       | 1,234                                     | 3,617   | 10,640   | 2.5                            |
| 97–98.....        | 0.314725  | 3,000                       | 944                                       | 2,528   | 7,023  | 2.3                            |
| 98–99.....        | 0.338071  | 2,056                       | 695                                       | 1,708   | 4,495  | 2.2                            |
| 99–100.....       | 0.361370  | 1,361                       | 492                                       | 1,115   | 2,787  | 2.0                            |
| 100 and over..... | 1.000000  | 869                         | 869                                       | 1,672   | 1,672  | 1.9                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 15. Life table for non-Hispanic white females: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table15.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table15.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.004148  | 100,000                     | 415                                       | 99,636  | 8,098,114  | 81.0                           |
| 1-2.....    | 0.000250  | 99,585                      | 25  | 99,573  | 7,998,478  | 80.3                           |
| 2-3.....    | 0.000160  | 99,560                      | 16  | 99,552  | 7,898,906  | 79.3                           |
| 3-4.....    | 0.000138  | 99,544                      | 14  | 99,538  | 7,799,353  | 78.4                           |
| 4-5.....    | 0.000107  | 99,531                      | 11  | 99,525  | 7,699,816  | 77.4                           |
| 5-6.....    | 0.000099  | 99,520                      | 10  | 99,515  | 7,600,290  | 76.4                           |
| 6-7.....    | 0.000089  | 99,510                      | 9   | 99,506  | 7,500,775  | 75.4                           |
| 7-8.....    | 0.000082  | 99,501                      | 8   | 99,497  | 7,401,269  | 74.4                           |
| 8-9.....    | 0.000076  | 99,493                      | 8   | 99,489  | 7,301,772  | 73.4                           |
| 9-10.....   | 0.000073  | 99,486                      | 7   | 99,482  | 7,202,283  | 72.4                           |
| 10-11.....  | 0.000073  | 99,478                      | 7   | 99,475  | 7,102,801  | 71.4                           |
| 11-12.....  | 0.000079  | 99,471                      | 8   | 99,467  | 7,003,326  | 70.4                           |
| 12-13.....  | 0.000096  | 99,463                      | 10  | 99,458  | 6,903,859  | 69.4                           |
| 13-14.....  | 0.000124  | 99,454                      | 12  | 99,447  | 6,804,401  | 68.4                           |
| 14-15.....  | 0.000162  | 99,441                      | 16  | 99,433  | 6,704,953  | 67.4                           |
| 15-16.....  | 0.000205  | 99,425                      | 20  | 99,415  | 6,605,520  | 66.4                           |
| 16-17.....  | 0.000249  | 99,405                      | 25  | 99,392  | 6,506,105  | 65.5                           |
| 17-18.....  | 0.000295  | 99,380                      | 29  | 99,365  | 6,406,713  | 64.5                           |
| 18-19.....  | 0.000342  | 99,351                      | 34  | 99,334  | 6,307,347  | 63.5                           |
| 19-20.....  | 0.000389  | 99,317                      | 39  | 99,297  | 6,208,014  | 62.5                           |
| 20-21.....  | 0.000438  | 99,278                      | 43  | 99,256  | 6,108,716  | 61.5                           |
| 21-22.....  | 0.000489  | 99,235                      | 48  | 99,210  | 6,009,460  | 60.6                           |
| 22-23.....  | 0.000538  | 99,186                      | 53  | 99,160  | 5,910,249  | 59.6                           |
| 23-24.....  | 0.000583  | 99,133                      | 58  | 99,104  | 5,811,090  | 58.6                           |
| 24-25.....  | 0.000625  | 99,075                      | 62  | 99,044  | 5,711,986  | 57.7                           |
| 25-26.....  | 0.000664  | 99,013                      | 66  | 98,980  | 5,612,941  | 56.7                           |
| 26-27.....  | 0.000705  | 98,947                      | 70  | 98,913  | 5,513,961  | 55.7                           |
| 27-28.....  | 0.000750  | 98,878                      | 74  | 98,841  | 5,415,048  | 54.8                           |
| 28-29.....  | 0.000803  | 98,804                      | 79  | 98,764  | 5,316,208  | 53.8                           |
| 29-30.....  | 0.000863  | 98,724                      | 85  | 98,682  | 5,217,444  | 52.8                           |
| 30-31.....  | 0.000930  | 98,639                      | 92  | 98,593  | 5,118,762  | 51.9                           |
| 31-32.....  | 0.000996  | 98,547                      | 98  | 98,498  | 5,020,169  | 50.9                           |
| 32-33.....  | 0.001058  | 98,449                      | 104                                       | 98,397  | 4,921,671  | 50.0                           |
| 33-34.....  | 0.001110  | 98,345                      | 109                                       | 98,290  | 4,823,274  | 49.0                           |
| 34-35.....  | 0.001156  | 98,236                      | 114                                       | 98,179  | 4,724,983  | 48.1                           |
| 35-36.....  | 0.001206  | 98,122                      | 118                                       | 98,063  | 4,626,804  | 47.2                           |
| 36-37.....  | 0.001264  | 98,004                      | 124                                       | 97,942  | 4,528,741  | 46.2                           |
| 37-38.....  | 0.001323  | 97,880                      | 129                                       | 97,815  | 4,430,799  | 45.3                           |
| 38-39.....  | 0.001384  | 97,751                      | 135                                       | 97,683  | 4,332,984  | 44.3                           |
| 39-40.....  | 0.001453  | 97,615                      | 142                                       | 97,544  | 4,235,301  | 43.4                           |
| 40-41.....  | 0.001538  | 97,473                      | 150                                       | 97,398  | 4,137,757  | 42.5                           |
| 41-42.....  | 0.001643  | 97,324                      | 160                                       | 97,244  | 4,040,358  | 41.5                           |
| 42-43.....  | 0.001762  | 97,164                      | 171                                       | 97,078  | 3,943,115  | 40.6                           |
| 43-44.....  | 0.001887  | 96,992                      | 183                                       | 96,901  | 3,846,036  | 39.7                           |
| 44-45.....  | 0.002018  | 96,809                      | 195                                       | 96,712  | 3,749,135  | 38.7                           |
| 45-46.....  | 0.002155  | 96,614                      | 208                                       | 96,510  | 3,652,424  | 37.8                           |
| 46-47.....  | 0.002309  | 96,406                      | 223                                       | 96,295  | 3,555,914  | 36.9                           |
| 47-48.....  | 0.002488  | 96,183                      | 239                                       | 96,064  | 3,459,619  | 36.0                           |
| 48-49.....  | 0.002704  | 95,944                      | 259                                       | 95,814  | 3,363,555  | 35.1                           |
| 49-50.....  | 0.002955  | 95,685                      | 283                                       | 95,543  | 3,267,741  | 34.2                           |
| 50-51.....  | 0.003219  | 95,402                      | 307                                       | 95,248  | 3,172,198  | 33.3                           |
| 51-52.....  | 0.003498  | 95,095                      | 333                                       | 94,929  | 3,076,950  | 32.4                           |
| 52-53.....  | 0.003815  | 94,762                      | 362                                       | 94,581  | 2,982,021  | 31.5                           |
| 53-54.....  | 0.004167  | 94,401                      | 393                                       | 94,204  | 2,887,440  | 30.6                           |
| 54-55.....  | 0.004538  | 94,007                      | 427                                       | 93,794  | 2,793,236  | 29.7                           |
| 55-56.....  | 0.004919  | 93,581                      | 460                                       | 93,351  | 2,699,442  | 28.8                           |
| 56-57.....  | 0.005298  | 93,120                      | 493                                       | 92,874  | 2,606,091  | 28.0                           |
| 57-58.....  | 0.005671  | 92,627                      | 525                                       | 92,364  | 2,513,217  | 27.1                           |
| 58-59.....  | 0.006045  | 92,102                      | 557                                       | 91,823  | 2,420,853  | 26.3                           |
| 59-60.....  | 0.006436  | 91,545                      | 589                                       | 91,250  | 2,329,030  | 25.4                           |
| 60-61.....  | 0.006864  | 90,956                      | 624                                       | 90,644  | 2,237,779  | 24.6                           |

See footnotes at end of table.

**Table 15. Life table for non-Hispanic white females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table15.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table15.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.007336  | 90,331                      | 663                                       | 90,000  | 2,147,136  | 23.8                           |
| 62–63.....        | 0.007851  | 89,669                      | 704                                       | 89,317  | 2,057,135  | 22.9                           |
| 63–64.....        | 0.008413  | 88,965                      | 748                                       | 88,591  | 1,967,819  | 22.1                           |
| 64–65.....        | 0.009031  | 88,216                      | 797                                       | 87,818  | 1,879,228  | 21.3                           |
| 65–66.....        | 0.009695  | 87,420                      | 848                                       | 86,996  | 1,791,410  | 20.5                           |
| 66–67.....        | 0.010459  | 86,572                      | 905                                       | 86,119  | 1,704,414  | 19.7                           |
| 67–68.....        | 0.011350  | 85,667                      | 972                                       | 85,180  | 1,618,295  | 18.9                           |
| 68–69.....        | 0.012450  | 84,694                      | 1,054                                     | 84,167  | 1,533,114  | 18.1                           |
| 69–70.....        | 0.013722  | 83,640                      | 1,148                                     | 83,066  | 1,448,947  | 17.3                           |
| 70–71.....        | 0.015033  | 82,492                      | 1,240                                     | 81,872  | 1,365,881  | 16.6                           |
| 71–72.....        | 0.016793  | 81,252                      | 1,364                                     | 80,570  | 1,284,009  | 15.8                           |
| 72–73.....        | 0.018476  | 79,888                      | 1,476                                     | 79,150  | 1,203,439  | 15.1                           |
| 73–74.....        | 0.020306  | 78,412                      | 1,592                                     | 77,616  | 1,124,290  | 14.3                           |
| 74–75.....        | 0.022219  | 76,819                      | 1,707                                     | 75,966  | 1,046,674  | 13.6                           |
| 75–76.....        | 0.024696  | 75,113                      | 1,855                                     | 74,185  | 970,708  | 12.9                           |
| 76–77.....        | 0.027380  | 73,258                      | 2,006                                     | 72,255  | 896,523  | 12.2                           |
| 77–78.....        | 0.030353  | 71,252                      | 2,163                                     | 70,170  | 824,268  | 11.6                           |
| 78–79.....        | 0.033969  | 69,089                      | 2,347                                     | 67,916  | 754,098  | 10.9                           |
| 79–80.....        | 0.037628  | 66,742                      | 2,511                                     | 65,486  | 686,182  | 10.3                           |
| 80–81.....        | 0.042146  | 64,231                      | 2,707                                     | 62,877  | 620,696  | 9.7                            |
| 81–82.....        | 0.046826  | 61,524                      | 2,881                                     | 60,083  | 557,819  | 9.1                            |
| 82–83.....        | 0.052476  | 58,643                      | 3,077                                     | 57,104  | 497,735  | 8.5                            |
| 83–84.....        | 0.059639  | 55,565                      | 3,314                                     | 53,909  | 440,631  | 7.9                            |
| 84–85.....        | 0.066801  | 52,252                      | 3,490                                     | 50,506  | 386,723  | 7.4                            |
| 85–86.....        | 0.074238  | 48,761                      | 3,620                                     | 46,951  | 336,216  | 6.9                            |
| 86–87.....        | 0.082165  | 45,141                      | 3,709                                     | 43,287  | 289,265  | 6.4                            |
| 87–88.....        | 0.092963  | 41,432                      | 3,852                                     | 39,506  | 245,979  | 5.9                            |
| 88–89.....        | 0.104924  | 37,581                      | 3,943                                     | 35,609  | 206,472  | 5.5                            |
| 89–90.....        | 0.118108  | 33,637                      | 3,973                                     | 31,651  | 170,863  | 5.1                            |
| 90–91.....        | 0.132557  | 29,665                      | 3,932                                     | 27,698  | 139,212  | 4.7                            |
| 91–92.....        | 0.148296  | 25,732                      | 3,816                                     | 23,824  | 111,514  | 4.3                            |
| 92–93.....        | 0.165326  | 21,916                      | 3,623                                     | 20,105  | 87,690   | 4.0                            |
| 93–94.....        | 0.183618  | 18,293                      | 3,359                                     | 16,613  | 67,585   | 3.7                            |
| 94–95.....        | 0.203115  | 14,934                      | 3,033                                     | 13,417  | 50,972   | 3.4                            |
| 95–96.....        | 0.223722  | 11,901                      | 2,662                                     | 10,569  | 37,554   | 3.2                            |
| 96–97.....        | 0.245314  | 9,238                       | 2,266                                     | 8,105   | 26,985   | 2.9                            |
| 97–98.....        | 0.267731  | 6,972                       | 1,867                                     | 6,039   | 18,880   | 2.7                            |
| 98–99.....        | 0.290782  | 5,105                       | 1,485                                     | 4,363   | 12,841   | 2.5                            |
| 99–100.....       | 0.314254  | 3,621                       | 1,138                                     | 3,052   | 8,478  | 2.3                            |
| 100 and over..... | 1.000000  | 2,483                       | 2,483                                     | 5,426   | 5,426  | 2.2                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 16. Life table for the non-Hispanic black population: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table16.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table16.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.010888  | 100,000                     | 1,089                                     | 99,056  | 7,488,072  | 74.9                           |
| 1-2.....    | 0.000661  | 98,911                      | 65  | 98,878  | 7,389,016  | 74.7                           |
| 2-3.....    | 0.000413  | 98,846                      | 41  | 98,825  | 7,290,138  | 73.8                           |
| 3-4.....    | 0.000312  | 98,805                      | 31  | 98,790  | 7,191,312  | 72.8                           |
| 4-5.....    | 0.000266  | 98,774                      | 26  | 98,761  | 7,092,523  | 71.8                           |
| 5-6.....    | 0.000234  | 98,748                      | 23  | 98,736  | 6,993,761  | 70.8                           |
| 6-7.....    | 0.000208  | 98,725                      | 21  | 98,715  | 6,895,025  | 69.8                           |
| 7-8.....    | 0.000188  | 98,704                      | 19  | 98,695  | 6,796,310  | 68.9                           |
| 8-9.....    | 0.000168  | 98,686                      | 17  | 98,678  | 6,697,615  | 67.9                           |
| 9-10.....   | 0.000150  | 98,669                      | 15  | 98,662  | 6,598,938  | 66.9                           |
| 10-11.....  | 0.000141  | 98,654                      | 14  | 98,647  | 6,500,276  | 65.9                           |
| 11-12.....  | 0.000154  | 98,641                      | 15  | 98,633  | 6,401,628  | 64.9                           |
| 12-13.....  | 0.000201  | 98,625                      | 20  | 98,615  | 6,302,996  | 63.9                           |
| 13-14.....  | 0.000291  | 98,605                      | 29  | 98,591  | 6,204,380  | 62.9                           |
| 14-15.....  | 0.000413  | 98,577                      | 41  | 98,556  | 6,105,789  | 61.9                           |
| 15-16.....  | 0.000544  | 98,536                      | 54  | 98,509  | 6,007,233  | 61.0                           |
| 16-17.....  | 0.000675  | 98,483                      | 67  | 98,449  | 5,908,723  | 60.0                           |
| 17-18.....  | 0.000814  | 98,416                      | 80  | 98,376  | 5,810,274  | 59.0                           |
| 18-19.....  | 0.000955  | 98,336                      | 94  | 98,289  | 5,711,898  | 58.1                           |
| 19-20.....  | 0.001095  | 98,242                      | 108                                       | 98,188  | 5,613,609  | 57.1                           |
| 20-21.....  | 0.001236  | 98,134                      | 121                                       | 98,074  | 5,515,421  | 56.2                           |
| 21-22.....  | 0.001369  | 98,013                      | 134                                       | 97,946  | 5,417,347  | 55.3                           |
| 22-23.....  | 0.001474  | 97,879                      | 144                                       | 97,807  | 5,319,401  | 54.3                           |
| 23-24.....  | 0.001541  | 97,735                      | 151                                       | 97,659  | 5,221,594  | 53.4                           |
| 24-25.....  | 0.001580  | 97,584                      | 154                                       | 97,507  | 5,123,934  | 52.5                           |
| 25-26.....  | 0.001611  | 97,430                      | 157                                       | 97,351  | 5,026,427  | 51.6                           |
| 26-27.....  | 0.001646  | 97,273                      | 160                                       | 97,193  | 4,929,076  | 50.7                           |
| 27-28.....  | 0.001682  | 97,113                      | 163                                       | 97,031  | 4,831,883  | 49.8                           |
| 28-29.....  | 0.001726  | 96,949                      | 167                                       | 96,866  | 4,734,852  | 48.8                           |
| 29-30.....  | 0.001781  | 96,782                      | 172                                       | 96,696  | 4,637,986  | 47.9                           |
| 30-31.....  | 0.001841  | 96,610                      | 178                                       | 96,521  | 4,541,290  | 47.0                           |
| 31-32.....  | 0.001909  | 96,432                      | 184                                       | 96,340  | 4,444,769  | 46.1                           |
| 32-33.....  | 0.001996  | 96,248                      | 192                                       | 96,152  | 4,348,429  | 45.2                           |
| 33-34.....  | 0.002101  | 96,056                      | 202                                       | 95,955  | 4,252,277  | 44.3                           |
| 34-35.....  | 0.002218  | 95,854                      | 213                                       | 95,748  | 4,156,322  | 43.4                           |
| 35-36.....  | 0.002346  | 95,641                      | 224                                       | 95,529  | 4,060,575  | 42.5                           |
| 36-37.....  | 0.002478  | 95,417                      | 236                                       | 95,299  | 3,965,045  | 41.6                           |
| 37-38.....  | 0.002602  | 95,181                      | 248                                       | 95,057  | 3,869,747  | 40.7                           |
| 38-39.....  | 0.002717  | 94,933                      | 258                                       | 94,804  | 3,774,690  | 39.8                           |
| 39-40.....  | 0.002834  | 94,675                      | 268                                       | 94,541  | 3,679,886  | 38.9                           |
| 40-41.....  | 0.002973  | 94,407                      | 281                                       | 94,266  | 3,585,345  | 38.0                           |
| 41-42.....  | 0.003141  | 94,126                      | 296                                       | 93,978  | 3,491,078  | 37.1                           |
| 42-43.....  | 0.003328  | 93,830                      | 312                                       | 93,674  | 3,397,100  | 36.2                           |
| 43-44.....  | 0.003527  | 93,518                      | 330                                       | 93,353  | 3,303,426  | 35.3                           |
| 44-45.....  | 0.003739  | 93,188                      | 348                                       | 93,014  | 3,210,073  | 34.4                           |
| 45-46.....  | 0.003965  | 92,840                      | 368                                       | 92,656  | 3,117,059  | 33.6                           |
| 46-47.....  | 0.004225  | 92,472                      | 391                                       | 92,276  | 3,024,403  | 32.7                           |
| 47-48.....  | 0.004535  | 92,081                      | 418                                       | 91,872  | 2,932,126  | 31.8                           |
| 48-49.....  | 0.004912  | 91,663                      | 450                                       | 91,438  | 2,840,254  | 31.0                           |
| 49-50.....  | 0.005356  | 91,213                      | 489                                       | 90,969  | 2,748,816  | 30.1                           |
| 50-51.....  | 0.005823  | 90,725                      | 528                                       | 90,461  | 2,657,847  | 29.3                           |
| 51-52.....  | 0.006325  | 90,196                      | 570                                       | 89,911  | 2,567,386  | 28.5                           |
| 52-53.....  | 0.006917  | 89,626                      | 620                                       | 89,316  | 2,477,475  | 27.6                           |
| 53-54.....  | 0.007612  | 89,006                      | 678                                       | 88,667  | 2,388,159  | 26.8                           |
| 54-55.....  | 0.008381  | 88,328                      | 740                                       | 87,958  | 2,299,492  | 26.0                           |
| 55-56.....  | 0.009175  | 87,588                      | 804                                       | 87,186  | 2,211,534  | 25.2                           |
| 56-57.....  | 0.009974  | 86,785                      | 866                                       | 86,352  | 2,124,347  | 24.5                           |
| 57-58.....  | 0.010805  | 85,919                      | 928                                       | 85,455  | 2,037,996  | 23.7                           |
| 58-59.....  | 0.011687  | 84,991                      | 993                                       | 84,494  | 1,952,541  | 23.0                           |
| 59-60.....  | 0.012631  | 83,997                      | 1,061                                     | 83,467  | 1,868,047  | 22.2                           |
| 60-61.....  | 0.013643  | 82,936                      | 1,131                                     | 82,371  | 1,784,580  | 21.5                           |

See footnotes at end of table.



**Table 16. Life table for the non-Hispanic black population: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table16.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table16.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.014703  | 81,805                      | 1,203                                     | 81,204  | 1,702,209  | 20.8                           |
| 62–63.....        | 0.015794  | 80,602                      | 1,273                                     | 79,966  | 1,621,006  | 20.1                           |
| 63–64.....        | 0.016895  | 79,329                      | 1,340                                     | 78,659  | 1,541,040  | 19.4                           |
| 64–65.....        | 0.018011  | 77,989                      | 1,405                                     | 77,287  | 1,462,381  | 18.8                           |
| 65–66.....        | 0.019228  | 76,584                      | 1,473                                     | 75,848  | 1,385,094  | 18.1                           |
| 66–67.....        | 0.020519  | 75,112                      | 1,541                                     | 74,341  | 1,309,246  | 17.4                           |
| 67–68.....        | 0.021793  | 73,570                      | 1,603                                     | 72,769  | 1,234,905  | 16.8                           |
| 68–69.....        | 0.022978  | 71,967                      | 1,654                                     | 71,140  | 1,162,136  | 16.1                           |
| 69–70.....        | 0.024190  | 70,314                      | 1,701                                     | 69,463  | 1,090,996  | 15.5                           |
| 70–71.....        | 0.025353  | 68,613                      | 1,740                                     | 67,743  | 1,021,533  | 14.9                           |
| 71–72.....        | 0.027123  | 66,873                      | 1,814                                     | 65,966  | 953,790  | 14.3                           |
| 72–73.....        | 0.029047  | 65,059                      | 1,890                                     | 64,114  | 887,824  | 13.6                           |
| 73–74.....        | 0.031425  | 63,170                      | 1,985                                     | 62,177  | 823,709  | 13.0                           |
| 74–75.....        | 0.033919  | 61,184                      | 2,075                                     | 60,147  | 761,532  | 12.4                           |
| 75–76.....        | 0.036674  | 59,109                      | 2,168                                     | 58,025  | 701,386  | 11.9                           |
| 76–77.....        | 0.039635  | 56,941                      | 2,257                                     | 55,813  | 643,360  | 11.3                           |
| 77–78.....        | 0.043069  | 54,684                      | 2,355                                     | 53,507  | 587,548  | 10.7                           |
| 78–79.....        | 0.047116  | 52,329                      | 2,466                                     | 51,096  | 534,041  | 10.2                           |
| 79–80.....        | 0.050914  | 49,864                      | 2,539                                     | 48,594  | 482,944  | 9.7                            |
| 80–81.....        | 0.055397  | 47,325                      | 2,622                                     | 46,014  | 434,350  | 9.2                            |
| 81–82.....        | 0.059988  | 44,703                      | 2,682                                     | 43,362  | 388,336  | 8.7                            |
| 82–83.....        | 0.065589  | 42,022                      | 2,756                                     | 40,644  | 344,973  | 8.2                            |
| 83–84.....        | 0.071831  | 39,265                      | 2,820                                     | 37,855  | 304,330  | 7.8                            |
| 84–85.....        | 0.078054  | 36,445                      | 2,845                                     | 35,023  | 266,475  | 7.3                            |
| 85–86.....        | 0.083913  | 33,600                      | 2,820                                     | 32,191  | 231,452  | 6.9                            |
| 86–87.....        | 0.092092  | 30,781                      | 2,835                                     | 29,363  | 199,261  | 6.5                            |
| 87–88.....        | 0.100992  | 27,946                      | 2,822                                     | 26,535  | 169,898  | 6.1                            |
| 88–89.....        | 0.110586  | 25,124                      | 2,778                                     | 23,735  | 143,363  | 5.7                            |
| 89–90.....        | 0.120897  | 22,345                      | 2,702                                     | 20,995  | 119,628  | 5.4                            |
| 90–91.....        | 0.131942  | 19,644                      | 2,592                                     | 18,348  | 98,634   | 5.0                            |
| 91–92.....        | 0.143730  | 17,052                      | 2,451                                     | 15,827  | 80,286   | 4.7                            |
| 92–93.....        | 0.156263  | 14,601                      | 2,282                                     | 13,460  | 64,459   | 4.4                            |
| 93–94.....        | 0.169534  | 12,320                      | 2,089                                     | 11,275  | 50,999   | 4.1                            |
| 94–95.....        | 0.183528  | 10,231                      | 1,878                                     | 9,292   | 39,723   | 3.9                            |
| 95–96.....        | 0.198216  | 8,353                       | 1,656                                     | 7,525   | 30,431   | 3.6                            |
| 96–97.....        | 0.213560  | 6,698                       | 1,430                                     | 5,982   | 22,906   | 3.4                            |
| 97–98.....        | 0.229509  | 5,267                       | 1,209                                     | 4,663   | 16,923   | 3.2                            |
| 98–99.....        | 0.246003  | 4,058                       | 998                                       | 3,559   | 12,261   | 3.0                            |
| 99–100.....       | 0.262970  | 3,060                       | 805                                       | 2,658   | 8,701  | 2.8                            |
| 100 and over..... | 1.000000  | 2,255                       | 2,255                                     | 6,044   | 6,044  | 2.7                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 17. Life table for non-Hispanic black males: United States, 2017**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table17.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table17.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.011878  | 100,000                     | 1,188                                     | 98,974  | 7,151,020  | 71.5                           |
| 1-2.....    | 0.000624  | 98,812                      | 62  | 98,781  | 7,052,046  | 71.4                           |
| 2-3.....    | 0.000395  | 98,751                      | 39  | 98,731  | 6,953,264  | 70.4                           |
| 3-4.....    | 0.000354  | 98,712                      | 35  | 98,694  | 6,854,533  | 69.4                           |
| 4-5.....    | 0.000239  | 98,677                      | 24  | 98,665  | 6,755,839  | 68.5                           |
| 5-6.....    | 0.000232  | 98,653                      | 23  | 98,642  | 6,657,174  | 67.5                           |
| 6-7.....    | 0.000214  | 98,630                      | 21  | 98,620  | 6,558,533  | 66.5                           |
| 7-8.....    | 0.000196  | 98,609                      | 19  | 98,599  | 6,459,913  | 65.5                           |
| 8-9.....    | 0.000169  | 98,590                      | 17  | 98,581  | 6,361,314  | 64.5                           |
| 9-10.....   | 0.000137  | 98,573                      | 13  | 98,566  | 6,262,732  | 63.5                           |
| 10-11.....  | 0.000114  | 98,560                      | 11  | 98,554  | 6,164,166  | 62.5                           |
| 11-12.....  | 0.000126  | 98,548                      | 12  | 98,542  | 6,065,612  | 61.5                           |
| 12-13.....  | 0.000204  | 98,536                      | 20  | 98,526  | 5,967,070  | 60.6                           |
| 13-14.....  | 0.000363  | 98,516                      | 36  | 98,498  | 5,868,544  | 59.6                           |
| 14-15.....  | 0.000582  | 98,480                      | 57  | 98,451  | 5,770,047  | 58.6                           |
| 15-16.....  | 0.000817  | 98,423                      | 80  | 98,383  | 5,671,595  | 57.6                           |
| 16-17.....  | 0.001045  | 98,342                      | 103                                       | 98,291  | 5,573,213  | 56.7                           |
| 17-18.....  | 0.001273  | 98,240                      | 125                                       | 98,177  | 5,474,922  | 55.7                           |
| 18-19.....  | 0.001490  | 98,114                      | 146                                       | 98,041  | 5,376,745  | 54.8                           |
| 19-20.....  | 0.001691  | 97,968                      | 166                                       | 97,886  | 5,278,703  | 53.9                           |
| 20-21.....  | 0.001891  | 97,803                      | 185                                       | 97,710  | 5,180,818  | 53.0                           |
| 21-22.....  | 0.002078  | 97,618                      | 203                                       | 97,516  | 5,083,108  | 52.1                           |
| 22-23.....  | 0.002221  | 97,415                      | 216                                       | 97,307  | 4,985,591  | 51.2                           |
| 23-24.....  | 0.002309  | 97,198                      | 224                                       | 97,086  | 4,888,285  | 50.3                           |
| 24-25.....  | 0.002354  | 96,974                      | 228                                       | 96,860  | 4,791,198  | 49.4                           |
| 25-26.....  | 0.002386  | 96,746                      | 231                                       | 96,630  | 4,694,338  | 48.5                           |
| 26-27.....  | 0.002421  | 96,515                      | 234                                       | 96,398  | 4,597,708  | 47.6                           |
| 27-28.....  | 0.002456  | 96,281                      | 236                                       | 96,163  | 4,501,310  | 46.8                           |
| 28-29.....  | 0.002499  | 96,045                      | 240                                       | 95,925  | 4,405,147  | 45.9                           |
| 29-30.....  | 0.002554  | 95,805                      | 245                                       | 95,682  | 4,309,222  | 45.0                           |
| 30-31.....  | 0.002611  | 95,560                      | 249                                       | 95,435  | 4,213,540  | 44.1                           |
| 31-32.....  | 0.002674  | 95,311                      | 255                                       | 95,183  | 4,118,105  | 43.2                           |
| 32-33.....  | 0.002768  | 95,056                      | 263                                       | 94,924  | 4,022,921  | 42.3                           |
| 33-34.....  | 0.002899  | 94,793                      | 275                                       | 94,655  | 3,927,997  | 41.4                           |
| 34-35.....  | 0.003051  | 94,518                      | 288                                       | 94,374  | 3,833,342  | 40.6                           |
| 35-36.....  | 0.003224  | 94,229                      | 304                                       | 94,077  | 3,738,969  | 39.7                           |
| 36-37.....  | 0.003396  | 93,926                      | 319                                       | 93,766  | 3,644,891  | 38.8                           |
| 37-38.....  | 0.003543  | 93,607                      | 332                                       | 93,441  | 3,551,125  | 37.9                           |
| 38-39.....  | 0.003654  | 93,275                      | 341                                       | 93,105  | 3,457,684  | 37.1                           |
| 39-40.....  | 0.003751  | 92,934                      | 349                                       | 92,760  | 3,364,580  | 36.2                           |
| 40-41.....  | 0.003863  | 92,586                      | 358                                       | 92,407  | 3,271,820  | 35.3                           |
| 41-42.....  | 0.004016  | 92,228                      | 370                                       | 92,043  | 3,179,413  | 34.5                           |
| 42-43.....  | 0.004208  | 91,858                      | 386                                       | 91,664  | 3,087,370  | 33.6                           |
| 43-44.....  | 0.004440  | 91,471                      | 406                                       | 91,268  | 2,995,706  | 32.8                           |
| 44-45.....  | 0.004708  | 91,065                      | 429                                       | 90,851  | 2,904,438  | 31.9                           |
| 45-46.....  | 0.004999  | 90,636                      | 453                                       | 90,410  | 2,813,588  | 31.0                           |
| 46-47.....  | 0.005326  | 90,183                      | 480                                       | 89,943  | 2,723,178  | 30.2                           |
| 47-48.....  | 0.005705  | 89,703                      | 512                                       | 89,447  | 2,633,235  | 29.4                           |
| 48-49.....  | 0.006153  | 89,191                      | 549                                       | 88,917  | 2,543,788  | 28.5                           |
| 49-50.....  | 0.006674  | 88,642                      | 592                                       | 88,346  | 2,454,872  | 27.7                           |
| 50-51.....  | 0.007225  | 88,051                      | 636                                       | 87,733  | 2,366,525  | 26.9                           |
| 51-52.....  | 0.007826  | 87,414                      | 684                                       | 87,072  | 2,278,793  | 26.1                           |
| 52-53.....  | 0.008547  | 86,730                      | 741                                       | 86,360  | 2,191,720  | 25.3                           |
| 53-54.....  | 0.009409  | 85,989                      | 809                                       | 85,585  | 2,105,360  | 24.5                           |
| 54-55.....  | 0.010374  | 85,180                      | 884                                       | 84,738  | 2,019,776  | 23.7                           |
| 55-56.....  | 0.011371  | 84,296                      | 959                                       | 83,817  | 1,935,038  | 23.0                           |
| 56-57.....  | 0.012380  | 83,338                      | 1,032                                     | 82,822  | 1,851,220  | 22.2                           |
| 57-58.....  | 0.013461  | 82,306                      | 1,108                                     | 81,752  | 1,768,398  | 21.5                           |
| 58-59.....  | 0.014649  | 81,198                      | 1,189                                     | 80,603  | 1,686,646  | 20.8                           |
| 59-60.....  | 0.015956  | 80,009                      | 1,277                                     | 79,370  | 1,606,043  | 20.1                           |
| 60-61.....  | 0.017379  | 78,732                      | 1,368                                     | 78,048  | 1,526,672  | 19.4                           |

See footnotes at end of table.

**Table 17. Life table for non-Hispanic black males: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table17.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table17.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.018871  | 77,364                      | 1,460                                     | 76,634  | 1,448,624  | 18.7                           |
| 62–63.....        | 0.020392  | 75,904                      | 1,548                                     | 75,130  | 1,371,991  | 18.1                           |
| 63–64.....        | 0.021894  | 74,356                      | 1,628                                     | 73,542  | 1,296,861  | 17.4                           |
| 64–65.....        | 0.023383  | 72,728                      | 1,701                                     | 71,878  | 1,223,319  | 16.8                           |
| 65–66.....        | 0.025004  | 71,027                      | 1,776                                     | 70,139  | 1,151,441  | 16.2                           |
| 66–67.....        | 0.026733  | 69,251                      | 1,851                                     | 68,326  | 1,081,301  | 15.6                           |
| 67–68.....        | 0.028404  | 67,400                      | 1,914                                     | 66,443  | 1,012,976  | 15.0                           |
| 68–69.....        | 0.029906  | 65,486                      | 1,958                                     | 64,506  | 946,533  | 14.5                           |
| 69–70.....        | 0.031347  | 63,527                      | 1,991                                     | 62,532  | 882,026  | 13.9                           |
| 70–71.....        | 0.032661  | 61,536                      | 2,010                                     | 60,531  | 819,495  | 13.3                           |
| 71–72.....        | 0.034939  | 59,526                      | 2,080                                     | 58,486  | 758,964  | 12.8                           |
| 72–73.....        | 0.036901  | 57,446                      | 2,120                                     | 56,386  | 700,477  | 12.2                           |
| 73–74.....        | 0.039841  | 55,326                      | 2,204                                     | 54,224  | 644,091  | 11.6                           |
| 74–75.....        | 0.042695  | 53,122                      | 2,268                                     | 51,988  | 589,867  | 11.1                           |
| 75–76.....        | 0.045755  | 50,854                      | 2,327                                     | 49,691  | 537,878  | 10.6                           |
| 76–77.....        | 0.049642  | 48,527                      | 2,409                                     | 47,323  | 488,188  | 10.1                           |
| 77–78.....        | 0.053051  | 46,118                      | 2,447                                     | 44,895  | 440,865  | 9.6                            |
| 78–79.....        | 0.058131  | 43,672                      | 2,539                                     | 42,402  | 395,970  | 9.1                            |
| 79–80.....        | 0.062970  | 41,133                      | 2,590                                     | 39,838  | 353,567  | 8.6                            |
| 80–81.....        | 0.067600  | 38,543                      | 2,605                                     | 37,240  | 313,729  | 8.1                            |
| 81–82.....        | 0.073070  | 35,937                      | 2,626                                     | 34,624  | 276,489  | 7.7                            |
| 82–83.....        | 0.080664  | 33,311                      | 2,687                                     | 31,968  | 241,865  | 7.3                            |
| 83–84.....        | 0.088605  | 30,624                      | 2,713                                     | 29,268  | 209,897  | 6.9                            |
| 84–85.....        | 0.095065  | 27,911                      | 2,653                                     | 26,584  | 180,629  | 6.5                            |
| 85–86.....        | 0.102003  | 25,258                      | 2,576                                     | 23,969  | 154,045  | 6.1                            |
| 86–87.....        | 0.111295  | 22,681                      | 2,524                                     | 21,419  | 130,075  | 5.7                            |
| 87–88.....        | 0.121252  | 20,157                      | 2,444                                     | 18,935  | 108,656  | 5.4                            |
| 88–89.....        | 0.131888  | 17,713                      | 2,336                                     | 16,545  | 89,722   | 5.1                            |
| 89–90.....        | 0.143212  | 15,377                      | 2,202                                     | 14,276  | 73,177   | 4.8                            |
| 90–91.....        | 0.155226  | 13,175                      | 2,045                                     | 12,152  | 58,901   | 4.5                            |
| 91–92.....        | 0.167924  | 11,130                      | 1,869                                     | 10,195  | 46,749   | 4.2                            |
| 92–93.....        | 0.181294  | 9,261                       | 1,679                                     | 8,421   | 36,554   | 3.9                            |
| 93–94.....        | 0.195311  | 7,582                       | 1,481                                     | 6,841   | 28,133   | 3.7                            |
| 94–95.....        | 0.209942  | 6,101                       | 1,281                                     | 5,461   | 21,291   | 3.5                            |
| 95–96.....        | 0.225147  | 4,820                       | 1,085                                     | 4,277   | 15,831   | 3.3                            |
| 96–97.....        | 0.240871  | 3,735                       | 900                                       | 3,285   | 11,553   | 3.1                            |
| 97–98.....        | 0.257055  | 2,835                       | 729                                       | 2,471   | 8,268  | 2.9                            |
| 98–99.....        | 0.273627  | 2,106                       | 576                                       | 1,818   | 5,797  | 2.8                            |
| 99–100.....       | 0.290510  | 1,530                       | 444                                       | 1,308   | 3,979  | 2.6                            |
| 100 and over..... | 1.000000  | 1,086                       | 1,086                                     | 2,671   | 2,671  | 2.5                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 18. Life table for non-Hispanic black females: United States, 2017**

Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table18.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table18.xlsx).

| Age (years) | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------|---|-----------------------------|---|---|--|--------------------------------|
|             | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 0-1.....    | 0.009865  | 100,000                     | 987                                       | 99,141  | 7,807,910  | 78.1                           |
| 1-2.....    | 0.000622  | 99,013                      | 62  | 98,983  | 7,708,769  | 77.9                           |
| 2-3.....    | 0.000382  | 98,952                      | 38  | 98,933  | 7,609,787  | 76.9                           |
| 3-4.....    | 0.000228  | 98,914                      | 23  | 98,903  | 7,510,854  | 75.9                           |
| 4-5.....    | 0.000263  | 98,892                      | 26  | 98,879  | 7,411,951  | 75.0                           |
| 5-6.....    | 0.000209  | 98,866                      | 21  | 98,855  | 7,313,072  | 74.0                           |
| 6-7.....    | 0.000180  | 98,845                      | 18  | 98,836  | 7,214,217  | 73.0                           |
| 7-8.....    | 0.000159  | 98,827                      | 16  | 98,819  | 7,115,381  | 72.0                           |
| 8-9.....    | 0.000145  | 98,811                      | 14  | 98,804  | 7,016,562  | 71.0                           |
| 9-10.....   | 0.000138  | 98,797                      | 14  | 98,790  | 6,917,758  | 70.0                           |
| 10-11.....  | 0.000138  | 98,783                      | 14  | 98,777  | 6,818,968  | 69.0                           |
| 11-12.....  | 0.000146  | 98,770                      | 14  | 98,762  | 6,720,191  | 68.0                           |
| 12-13.....  | 0.000162  | 98,755                      | 16  | 98,747  | 6,621,429  | 67.0                           |
| 13-14.....  | 0.000185  | 98,739                      | 18  | 98,730  | 6,522,681  | 66.1                           |
| 14-15.....  | 0.000216  | 98,721                      | 21  | 98,710  | 6,423,951  | 65.1                           |
| 15-16.....  | 0.000250  | 98,700                      | 25  | 98,687  | 6,325,241  | 64.1                           |
| 16-17.....  | 0.000291  | 98,675                      | 29  | 98,661  | 6,226,554  | 63.1                           |
| 17-18.....  | 0.000342  | 98,646                      | 34  | 98,629  | 6,127,893  | 62.1                           |
| 18-19.....  | 0.000407  | 98,613                      | 40  | 98,592  | 6,029,263  | 61.1                           |
| 19-20.....  | 0.000480  | 98,572                      | 47  | 98,549  | 5,930,671  | 60.2                           |
| 20-21.....  | 0.000558  | 98,525                      | 55  | 98,498  | 5,832,122  | 59.2                           |
| 21-22.....  | 0.000633  | 98,470                      | 62  | 98,439  | 5,733,625  | 58.2                           |
| 22-23.....  | 0.000697  | 98,408                      | 69  | 98,373  | 5,635,186  | 57.3                           |
| 23-24.....  | 0.000746  | 98,339                      | 73  | 98,302  | 5,536,813  | 56.3                           |
| 24-25.....  | 0.000784  | 98,266                      | 77  | 98,227  | 5,438,510  | 55.3                           |
| 25-26.....  | 0.000820  | 98,189                      | 80  | 98,148  | 5,340,283  | 54.4                           |
| 26-27.....  | 0.000859  | 98,108                      | 84  | 98,066  | 5,242,134  | 53.4                           |
| 27-28.....  | 0.000902  | 98,024                      | 88  | 97,980  | 5,144,068  | 52.5                           |
| 28-29.....  | 0.000954  | 97,936                      | 93  | 97,889  | 5,046,089  | 51.5                           |
| 29-30.....  | 0.001018  | 97,842                      | 100                                       | 97,792  | 4,948,200  | 50.6                           |
| 30-31.....  | 0.001092  | 97,742                      | 107                                       | 97,689  | 4,850,407  | 49.6                           |
| 31-32.....  | 0.001176  | 97,636                      | 115                                       | 97,578  | 4,752,718  | 48.7                           |
| 32-33.....  | 0.001266  | 97,521                      | 123                                       | 97,459  | 4,655,140  | 47.7                           |
| 33-34.....  | 0.001357  | 97,397                      | 132                                       | 97,331  | 4,557,681  | 46.8                           |
| 34-35.....  | 0.001447  | 97,265                      | 141                                       | 97,195  | 4,460,349  | 45.9                           |
| 35-36.....  | 0.001540  | 97,125                      | 150                                       | 97,050  | 4,363,155  | 44.9                           |
| 36-37.....  | 0.001642  | 96,975                      | 159                                       | 96,895  | 4,266,105  | 44.0                           |
| 37-38.....  | 0.001751  | 96,816                      | 170                                       | 96,731  | 4,169,209  | 43.1                           |
| 38-39.....  | 0.001873  | 96,646                      | 181                                       | 96,556  | 4,072,478  | 42.1                           |
| 39-40.....  | 0.002013  | 96,465                      | 194                                       | 96,368  | 3,975,923  | 41.2                           |
| 40-41.....  | 0.002179  | 96,271                      | 210                                       | 96,166  | 3,879,555  | 40.3                           |
| 41-42.....  | 0.002364  | 96,061                      | 227                                       | 95,948  | 3,783,389  | 39.4                           |
| 42-43.....  | 0.002549  | 95,834                      | 244                                       | 95,712  | 3,687,441  | 38.5                           |
| 43-44.....  | 0.002720  | 95,590                      | 260                                       | 95,460  | 3,591,729  | 37.6                           |
| 44-45.....  | 0.002883  | 95,330                      | 275                                       | 95,192  | 3,496,270  | 36.7                           |
| 45-46.....  | 0.003051  | 95,055                      | 290                                       | 94,910  | 3,401,077  | 35.8                           |
| 46-47.....  | 0.003251  | 94,765                      | 308                                       | 94,611  | 3,306,167  | 34.9                           |
| 47-48.....  | 0.003500  | 94,457                      | 331                                       | 94,291  | 3,211,557  | 34.0                           |
| 48-49.....  | 0.003815  | 94,126                      | 359                                       | 93,947  | 3,117,265  | 33.1                           |
| 49-50.....  | 0.004192  | 93,767                      | 393                                       | 93,570  | 3,023,319  | 32.2                           |
| 50-51.....  | 0.004588  | 93,374                      | 428                                       | 93,160  | 2,929,748  | 31.4                           |
| 51-52.....  | 0.005004  | 92,946                      | 465                                       | 92,713  | 2,836,589  | 30.5                           |
| 52-53.....  | 0.005484  | 92,480                      | 507                                       | 92,227  | 2,743,876  | 29.7                           |
| 53-54.....  | 0.006034  | 91,973                      | 555                                       | 91,696  | 2,651,649  | 28.8                           |
| 54-55.....  | 0.006632  | 91,418                      | 606                                       | 91,115  | 2,559,953  | 28.0                           |
| 55-56.....  | 0.007252  | 90,812                      | 659                                       | 90,483  | 2,468,838  | 27.2                           |
| 56-57.....  | 0.007873  | 90,153                      | 710                                       | 89,799  | 2,378,355  | 26.4                           |
| 57-58.....  | 0.008498  | 89,444                      | 760                                       | 89,064  | 2,288,556  | 25.6                           |
| 58-59.....  | 0.009133  | 88,684                      | 810                                       | 88,279  | 2,199,493  | 24.8                           |
| 59-60.....  | 0.009793  | 87,874                      | 861                                       | 87,443  | 2,111,214  | 24.0                           |
| 60-61.....  | 0.010488  | 87,013                      | 913                                       | 86,557  | 2,023,771  | 23.3                           |

See footnotes at end of table.

**Table 18. Life table for non-Hispanic black females: United States, 2017—Con.**Spreadsheet version available from: [https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Publications/NVSR/68\\_07/Table18.xlsx](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/68_07/Table18.xlsx).

| Age (years)       | Probability of dying between ages $x$ and $x + 1$ | Number surviving to age $x$ | Number dying between ages $x$ and $x + 1$ | Person-years lived between ages $x$ and $x + 1$ | Total number of person-years lived above age $x$ | Expectation of life at age $x$ |
|-------------------|---|-----------------------------|---|---|--|--------------------------------|
|                   | $q_x$   | $l_x$                       | $d_x$                                     | $L_x$   | $T_x$  | $e_x$                          |
| 61–62.....        | 0.011224  | 86,100                      | 966                                       | 85,617  | 1,937,214  | 22.5                           |
| 62–63.....        | 0.012002  | 85,134                      | 1,022                                     | 84,623  | 1,851,597  | 21.7                           |
| 63–64.....        | 0.012824  | 84,112                      | 1,079                                     | 83,573  | 1,766,973  | 21.0                           |
| 64–65.....        | 0.013689  | 83,034                      | 1,137                                     | 82,465  | 1,683,401  | 20.3                           |
| 65–66.....        | 0.014642  | 81,897                      | 1,199                                     | 81,297  | 1,600,935  | 19.5                           |
| 66–67.....        | 0.015648  | 80,698                      | 1,263                                     | 80,066  | 1,519,638  | 18.8                           |
| 67–68.....        | 0.016670  | 79,435                      | 1,324                                     | 78,773  | 1,439,571  | 18.1                           |
| 68–69.....        | 0.017662  | 78,111                      | 1,380                                     | 77,421  | 1,360,798  | 17.4                           |
| 69–70.....        | 0.018740  | 76,731                      | 1,438                                     | 76,012  | 1,283,377  | 16.7                           |
| 70–71.....        | 0.019833  | 75,293                      | 1,493                                     | 74,547  | 1,207,365  | 16.0                           |
| 71–72.....        | 0.021265  | 73,800                      | 1,569                                     | 73,015  | 1,132,818  | 15.3                           |
| 72–73.....        | 0.023245  | 72,231                      | 1,679                                     | 71,391  | 1,059,803  | 14.7                           |
| 73–74.....        | 0.025275  | 70,552                      | 1,783                                     | 69,660  | 988,412  | 14.0                           |
| 74–75.....        | 0.027611  | 68,769                      | 1,899                                     | 67,819  | 918,751  | 13.4                           |
| 75–76.....        | 0.030254  | 66,870                      | 2,023                                     | 65,858  | 850,932  | 12.7                           |
| 76–77.....        | 0.032734  | 64,847                      | 2,123                                     | 63,785  | 785,074  | 12.1                           |
| 77–78.....        | 0.036315  | 62,724                      | 2,278                                     | 61,585  | 721,289  | 11.5                           |
| 78–79.....        | 0.039780  | 60,446                      | 2,405                                     | 59,244  | 659,704  | 10.9                           |
| 79–80.....        | 0.043086  | 58,042                      | 2,501                                     | 56,791  | 600,460  | 10.3                           |
| 80–81.....        | 0.047666  | 55,541                      | 2,647                                     | 54,217  | 543,668  | 9.8                            |
| 81–82.....        | 0.051967  | 52,893                      | 2,749                                     | 51,519  | 489,451  | 9.3                            |
| 82–83.....        | 0.056636  | 50,145                      | 2,840                                     | 48,725  | 437,932  | 8.7                            |
| 83–84.....        | 0.062126  | 47,305                      | 2,939                                     | 45,835  | 389,207  | 8.2                            |
| 84–85.....        | 0.068571  | 44,366                      | 3,042                                     | 42,845  | 343,372  | 7.7                            |
| 85–86.....        | 0.074538  | 41,324                      | 3,080                                     | 39,784  | 300,527  | 7.3                            |
| 86–87.....        | 0.082404  | 38,244                      | 3,151                                     | 36,668  | 260,744  | 6.8                            |
| 87–88.....        | 0.091151  | 35,092                      | 3,199                                     | 33,493  | 224,076  | 6.4                            |
| 88–89.....        | 0.100667  | 31,893                      | 3,211                                     | 30,288  | 190,583  | 6.0                            |
| 89–90.....        | 0.110985  | 28,683                      | 3,183                                     | 27,091  | 160,295  | 5.6                            |
| 90–91.....        | 0.122132  | 25,499                      | 3,114                                     | 23,942  | 133,204  | 5.2                            |
| 91–92.....        | 0.134128  | 22,385                      | 3,002                                     | 20,884  | 109,262  | 4.9                            |
| 92–93.....        | 0.146985  | 19,383                      | 2,849                                     | 17,958  | 88,378   | 4.6                            |
| 93–94.....        | 0.160702  | 16,534                      | 2,657                                     | 15,205  | 70,419   | 4.3                            |
| 94–95.....        | 0.175268  | 13,877                      | 2,432                                     | 12,661  | 55,214   | 4.0                            |
| 95–96.....        | 0.190656  | 11,445                      | 2,182                                     | 10,354  | 42,554   | 3.7                            |
| 96–97.....        | 0.206827  | 9,263                       | 1,916                                     | 8,305   | 32,200   | 3.5                            |
| 97–98.....        | 0.223725  | 7,347                       | 1,644                                     | 6,525   | 23,895   | 3.3                            |
| 98–99.....        | 0.241279  | 5,703                       | 1,376                                     | 5,015   | 17,370   | 3.0                            |
| 99–100.....       | 0.259403  | 4,327                       | 1,122                                     | 3,766   | 12,355   | 2.9                            |
| 100 and over..... | 1.000000  | 3,205                       | 3,205                                     | 8,589   | 8,589  | 2.7                            |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2017**

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

| Area and year              | All races and origins |      |        | White      |      |        | Black <sup>1</sup> |      |        | Hispanic <sup>2</sup> |      |        | Non-Hispanic white <sup>2</sup> |      |        | Non-Hispanic black <sup>2</sup> |      |        |
|----------------------------|-----------------------|------|--------|------------|------|--------|--------------------|------|--------|-----------------------|------|--------|---------------------------------|------|--------|---------------------------------|------|--------|
|                            | Both sexes            | Male | Female | Both sexes | Male | Female | Both sexes         | Male | Female | Both sexes            | Male | Female | Both sexes                      | Male | Female | Both sexes                      | Male | Female |
| United States <sup>3</sup> |                       |      |        |            |      |        |                    |      |        |                       |      |        |                                 |      |        |                                 |      |        |
| 2017 <sup>4</sup>          | 78.6                  | 76.1 | 81.1   | 78.8       | 76.4 | 81.2   | 75.3               | 71.9 | 78.5   | 81.8                  | 79.1 | 84.3   | 78.5                            | 76.1 | 81.0   | 74.9                            | 71.5 | 78.1   |
| 2016 <sup>4</sup>          | 78.7                  | 76.2 | 81.1   | 78.9       | 76.4 | 81.3   | 75.3               | 72.0 | 78.3   | 81.8                  | 79.1 | 84.3   | 78.6                            | 76.2 | 81.0   | 74.9                            | 71.6 | 78.0   |
| 2015 <sup>4</sup>          | 78.7                  | 76.3 | 81.1   | 78.9       | 76.6 | 81.3   | 75.5               | 72.2 | 78.5   | 81.9                  | 79.3 | 84.3   | 78.7                            | 76.3 | 81.0   | 75.1                            | 71.9 | 78.1   |
| 2014 <sup>4</sup>          | 78.9                  | 76.5 | 81.3   | 79.1       | 76.7 | 81.4   | 75.6               | 72.5 | 78.5   | 82.1                  | 79.4 | 84.5   | 78.8                            | 76.5 | 81.2   | 75.3                            | 72.2 | 78.2   |
| 2013 <sup>4</sup>          | 78.8                  | 76.4 | 81.2   | 79.0       | 76.7 | 81.4   | 75.5               | 72.3 | 78.4   | 81.9                  | 79.2 | 84.2   | 78.8                            | 76.5 | 81.2   | 75.1                            | 71.9 | 78.1   |
| 2012 <sup>4</sup>          | 78.8                  | 76.4 | 81.2   | 79.1       | 76.7 | 81.4   | 75.5               | 72.3 | 78.4   | 81.9                  | 79.3 | 84.3   | 78.9                            | 76.5 | 81.2   | 75.1                            | 71.9 | 78.1   |
| 2011 <sup>4</sup>          | 78.7                  | 76.3 | 81.1   | 79.0       | 76.6 | 81.3   | 75.3               | 72.2 | 78.2   | 81.8                  | 79.2 | 84.2   | 78.7                            | 76.4 | 81.1   | 75.0                            | 71.8 | 77.8   |
| 2010 <sup>4</sup>          | 78.7                  | 76.2 | 81.0   | 78.9       | 76.5 | 81.3   | 75.1               | 71.8 | 78.0   | 81.7                  | 78.8 | 84.3   | 78.8                            | 76.4 | 81.1   | 74.7                            | 71.5 | 77.7   |
| 2009 <sup>4,5</sup>        | 78.5                  | 76.0 | 80.9   | 78.8       | 76.4 | 81.2   | 74.7               | 71.4 | 77.7   | 81.1                  | 78.4 | 83.5   | 78.7                            | 76.3 | 81.0   | 74.4                            | 71.0 | 77.4   |
| 2008 <sup>4,5</sup>        | 78.2                  | 75.6 | 80.6   | 78.5       | 76.1 | 80.9   | 74.3               | 70.9 | 77.3   | 80.8                  | 78.0 | 83.3   | 78.4                            | 76.0 | 80.7   | 73.9                            | 70.5 | 77.0   |
| 2007 <sup>4,5</sup>        | 78.1                  | 75.5 | 80.6   | 78.5       | 76.0 | 80.9   | 73.8               | 70.3 | 77.0   | 80.7                  | 77.8 | 83.2   | 78.4                            | 75.9 | 80.8   | 73.5                            | 69.9 | 76.7   |
| 2006 <sup>4,5</sup>        | 77.8                  | 75.2 | 80.3   | 78.3       | 75.8 | 80.7   | 73.4               | 69.9 | 76.7   | 80.3                  | 77.5 | 82.9   | 78.2                            | 75.7 | 80.6   | 73.1                            | 69.5 | 76.4   |
| 2005 <sup>4,5</sup>        | 77.6                  | 75.0 | 80.1   | 78.0       | 75.5 | 80.5   | 73.0               | 69.5 | 76.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 2004 <sup>4,5</sup>        | 77.6                  | 75.0 | 80.1   | 78.1       | 75.5 | 80.5   | 72.9               | 69.4 | 76.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 2003 <sup>4,5</sup>        | 77.2                  | 74.5 | 79.7   | 77.7       | 75.1 | 80.2   | 72.4               | 68.9 | 75.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 2002 <sup>4,5</sup>        | 77.0                  | 74.4 | 79.6   | 77.5       | 74.9 | 80.1   | 72.2               | 68.7 | 75.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 2001 <sup>4,5</sup>        | 77.0                  | 74.3 | 79.5   | 77.5       | 74.9 | 80.0   | 72.0               | 68.5 | 75.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 2000                       | 76.8                  | 74.1 | 79.3   | 77.3       | 74.7 | 79.9   | 71.8               | 68.2 | 75.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1999                       | 76.7                  | 73.9 | 79.4   | 77.3       | 74.6 | 79.9   | 71.4               | 67.8 | 74.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1998                       | 76.7                  | 73.8 | 79.5   | 77.3       | 74.5 | 80.0   | 71.3               | 67.6 | 74.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1997                       | 76.5                  | 73.6 | 79.4   | 77.1       | 74.3 | 79.9   | 71.1               | 67.2 | 74.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1996                       | 76.1                  | 73.1 | 79.1   | 76.8       | 73.9 | 79.7   | 70.2               | 66.1 | 74.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1995                       | 75.8                  | 72.5 | 78.9   | 76.5       | 73.4 | 79.6   | 69.6               | 65.2 | 73.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1994                       | 75.7                  | 72.4 | 79.0   | 76.5       | 73.3 | 79.6   | 69.5               | 64.9 | 73.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1993                       | 75.5                  | 72.2 | 78.8   | 76.3       | 73.1 | 79.5   | 69.2               | 64.6 | 73.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1992                       | 75.8                  | 72.3 | 79.1   | 76.5       | 73.2 | 79.8   | 69.6               | 65.0 | 73.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1991                       | 75.5                  | 72.0 | 78.9   | 76.3       | 72.9 | 79.6   | 69.3               | 64.6 | 73.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1990                       | 75.4                  | 71.8 | 78.8   | 76.1       | 72.7 | 79.4   | 69.1               | 64.5 | 73.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1989                       | 75.1                  | 71.7 | 78.5   | 75.9       | 72.5 | 79.2   | 68.8               | 64.3 | 73.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1988                       | 74.9                  | 71.4 | 78.3   | 75.6       | 72.2 | 78.9   | 68.9               | 64.4 | 73.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1987                       | 74.9                  | 71.4 | 78.3   | 75.6       | 72.1 | 78.9   | 69.1               | 64.7 | 73.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1986                       | 74.7                  | 71.2 | 78.2   | 75.4       | 71.9 | 78.8   | 69.1               | 64.8 | 73.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1985                       | 74.7                  | 71.1 | 78.2   | 75.3       | 71.8 | 78.7   | 69.3               | 65.0 | 73.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1984                       | 74.7                  | 71.1 | 78.2   | 75.3       | 71.8 | 78.7   | 69.5               | 65.3 | 73.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1983                       | 74.6                  | 71.0 | 78.1   | 75.2       | 71.6 | 78.7   | 69.4               | 65.2 | 73.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1982                       | 74.5                  | 70.8 | 78.1   | 75.1       | 71.5 | 78.7   | 69.4               | 65.1 | 73.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1981                       | 74.1                  | 70.4 | 77.8   | 74.8       | 71.1 | 78.4   | 68.9               | 64.5 | 73.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1980                       | 73.7                  | 70.0 | 77.4   | 74.4       | 70.7 | 78.1   | 68.1               | 63.8 | 72.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1979                       | 73.9                  | 70.0 | 77.8   | 74.6       | 70.8 | 78.4   | 68.5               | 64.0 | 72.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1978                       | 73.5                  | 69.6 | 77.3   | 74.1       | 70.4 | 78.0   | 68.1               | 63.7 | 72.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1977                       | 73.3                  | 69.5 | 77.2   | 74.0       | 70.2 | 77.9   | 67.7               | 63.4 | 72.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1976                       | 72.9                  | 69.1 | 76.8   | 73.6       | 69.9 | 77.5   | 67.2               | 62.9 | 71.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1975                       | 72.6                  | 68.8 | 76.6   | 73.4       | 69.5 | 77.3   | 66.8               | 62.4 | 71.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1974                       | 72.0                  | 68.2 | 75.9   | 72.8       | 69.0 | 76.7   | 66.0               | 61.7 | 70.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1973                       | 71.4                  | 67.6 | 75.3   | 72.2       | 68.5 | 76.1   | 65.0               | 60.9 | 69.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1972 <sup>6</sup>          | 71.2                  | 67.4 | 75.1   | 72.0       | 68.3 | 75.9   | 64.7               | 60.4 | 69.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1971                       | 71.1                  | 67.4 | 75.0   | 72.0       | 68.3 | 75.8   | 64.6               | 60.5 | 68.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1970                       | 70.8                  | 67.1 | 74.7   | 71.7       | 68.0 | 75.6   | 64.1               | 60.0 | 68.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1969                       | 70.5                  | 66.8 | 74.4   | 71.4       | 67.7 | 75.3   | 64.5               | 60.6 | 68.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1968                       | 70.2                  | 66.6 | 74.1   | 71.1       | 67.5 | 75.0   | 64.1               | 60.4 | 67.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1967                       | 70.5                  | 67.0 | 74.3   | 71.4       | 67.8 | 75.2   | 64.9               | 61.4 | 68.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |

See footnotes at end of table.

**Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2017—Con.**

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

| Area and year                    | All races and origins |      |        | White      |      |        | Black <sup>1</sup> |      |        | Hispanic <sup>2</sup> |      |        | Non-Hispanic white <sup>2</sup> |      |        | Non-Hispanic black <sup>2</sup> |      |        |
|----------------------------------|-----------------------|------|--------|------------|------|--------|--------------------|------|--------|-----------------------|------|--------|---------------------------------|------|--------|---------------------------------|------|--------|
|                                  | Both sexes            | Male | Female | Both sexes | Male | Female | Both sexes         | Male | Female | Both sexes            | Male | Female | Both sexes                      | Male | Female | Both sexes                      | Male | Female |
| United States <sup>3</sup> —Con. |                       |      |        |            |      |        |                    |      |        |                       |      |        |                                 |      |        |                                 |      |        |
| 1966.....                        | 70.2                  | 66.7 | 73.9   | 71.1       | 67.5 | 74.8   | 64.2               | 60.9 | 67.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1965.....                        | 70.2                  | 66.8 | 73.8   | 71.1       | 67.6 | 74.8   | 64.3               | 61.2 | 67.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1964.....                        | 70.2                  | 66.8 | 73.7   | 71.0       | 67.7 | 74.7   | 64.2               | 61.3 | 67.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1963 <sup>7</sup> .....          | 69.9                  | 66.6 | 73.4   | 70.8       | 67.4 | 74.4   | 63.7               | 61.0 | 66.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1962 <sup>7</sup> .....          | 70.1                  | 66.9 | 73.5   | 70.9       | 67.7 | 74.5   | 64.2               | 61.6 | 66.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1961.....                        | 70.2                  | 67.1 | 73.6   | 71.0       | 67.8 | 74.6   | 64.5               | 62.0 | 67.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1960.....                        | 69.7                  | 66.6 | 73.1   | 70.6       | 67.4 | 74.1   | 63.6               | 61.1 | 66.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1959.....                        | 69.9                  | 66.8 | 73.2   | 70.7       | 67.5 | 74.2   | 63.9               | 61.3 | 66.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1958.....                        | 69.6                  | 66.6 | 72.9   | 70.5       | 67.4 | 73.9   | 63.4               | 61.0 | 65.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1957.....                        | 69.5                  | 66.4 | 72.7   | 70.3       | 67.2 | 73.7   | 63.0               | 60.7 | 65.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1956.....                        | 69.7                  | 66.7 | 72.9   | 70.5       | 67.5 | 73.9   | 63.6               | 61.3 | 66.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1955.....                        | 69.6                  | 66.7 | 72.8   | 70.5       | 67.4 | 73.7   | 63.7               | 61.4 | 66.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1954.....                        | 69.6                  | 66.7 | 72.8   | 70.5       | 67.5 | 73.7   | 63.4               | 61.1 | 65.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1953.....                        | 68.8                  | 66.0 | 72.0   | 69.7       | 66.8 | 73.0   | 62.0               | 59.7 | 64.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1952.....                        | 68.6                  | 65.8 | 71.6   | 69.5       | 66.6 | 72.6   | 61.4               | 59.1 | 63.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1951.....                        | 68.4                  | 65.6 | 71.4   | 69.3       | 66.5 | 72.4   | 61.2               | 59.2 | 63.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1950.....                        | 68.2                  | 65.6 | 71.1   | 69.1       | 66.5 | 72.2   | 60.8               | 59.1 | 62.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1949.....                        | 68.0                  | 65.2 | 70.7   | 68.8       | 66.2 | 71.9   | 60.6               | 58.9 | 62.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1948.....                        | 67.2                  | 64.6 | 69.9   | 68.0       | 65.5 | 71.0   | 60.0               | 58.1 | 62.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1947.....                        | 66.8                  | 64.4 | 69.7   | 67.6       | 65.2 | 70.5   | 59.7               | 57.9 | 61.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1946.....                        | 66.7                  | 64.4 | 69.4   | 67.5       | 65.1 | 70.3   | 59.1               | 57.5 | 61.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1945.....                        | 65.9                  | 63.6 | 67.9   | 66.8       | 64.4 | 69.5   | 57.7               | 56.1 | 59.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1944.....                        | 65.2                  | 63.6 | 66.8   | 66.2       | 64.5 | 68.4   | 56.6               | 55.8 | 57.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1943.....                        | 63.3                  | 62.4 | 64.4   | 64.2       | 63.2 | 65.7   | 55.6               | 55.4 | 56.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1942.....                        | 66.2                  | 64.7 | 67.9   | 67.3       | 65.9 | 69.4   | 56.6               | 55.4 | 58.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1941.....                        | 64.8                  | 63.1 | 66.8   | 66.2       | 64.4 | 68.5   | 53.8               | 52.5 | 55.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1940.....                        | 62.9                  | 60.8 | 65.2   | 64.2       | 62.1 | 66.6   | 53.1               | 51.5 | 54.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1939.....                        | 63.7                  | 62.1 | 65.4   | 64.9       | 63.3 | 66.6   | 54.5               | 53.2 | 56.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1938.....                        | 63.5                  | 61.9 | 65.3   | 65.0       | 63.2 | 66.8   | 52.9               | 51.7 | 54.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1937.....                        | 60.0                  | 58.0 | 62.4   | 61.4       | 59.3 | 63.8   | 50.3               | 48.3 | 52.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1936.....                        | 58.5                  | 56.6 | 60.6   | 59.8       | 58.0 | 61.9   | 49.0               | 47.0 | 51.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1935.....                        | 61.7                  | 59.9 | 63.9   | 62.9       | 61.0 | 65.0   | 53.1               | 51.3 | 55.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1934.....                        | 61.1                  | 59.3 | 63.3   | 62.4       | 60.5 | 64.6   | 51.8               | 50.2 | 53.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1933.....                        | 63.3                  | 61.7 | 65.1   | 64.3       | 62.7 | 66.3   | 54.7               | 53.5 | 56.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1932.....                        | 62.1                  | 61.0 | 63.5   | 63.2       | 62.0 | 64.5   | 53.7               | 52.8 | 54.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1931.....                        | 61.1                  | 59.4 | 63.1   | 62.6       | 60.8 | 64.7   | 50.4               | 49.5 | 51.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1930.....                        | 59.7                  | 58.1 | 61.6   | 61.4       | 59.7 | 63.5   | 48.1               | 47.3 | 49.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1929.....                        | 57.1                  | 55.8 | 58.7   | 58.6       | 57.2 | 60.3   | 46.7               | 45.7 | 47.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| Death-registration states        |                       |      |        |            |      |        |                    |      |        |                       |      |        |                                 |      |        |                                 |      |        |
| 1928.....                        | 56.8                  | 55.6 | 58.3   | 58.4       | 57.0 | 60.0   | 46.3               | 45.6 | 47.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1927.....                        | 60.4                  | 59.0 | 62.1   | 62.0       | 60.5 | 63.9   | 48.2               | 47.6 | 48.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1926.....                        | 56.7                  | 55.5 | 58.0   | 58.2       | 57.0 | 59.6   | 44.6               | 43.7 | 45.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1925.....                        | 59.0                  | 57.6 | 60.6   | 60.7       | 59.3 | 62.4   | 45.7               | 44.9 | 46.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1924.....                        | 59.7                  | 58.1 | 61.5   | 61.4       | 59.8 | 63.4   | 46.6               | 45.5 | 47.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1923.....                        | 57.2                  | 56.1 | 58.5   | 58.3       | 57.1 | 59.6   | 48.3               | 47.7 | 48.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1922.....                        | 59.6                  | 58.4 | 61.0   | 60.4       | 59.1 | 61.9   | 52.4               | 51.8 | 53.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1921.....                        | 60.8                  | 60.0 | 61.8   | 61.8       | 60.8 | 62.9   | 51.5               | 51.6 | 51.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |

See footnotes at end of table.

**Table 19. Estimated life expectancy at birth, in years, by race, Hispanic origin, and sex: Death-registration states, 1900–1928, and United States, 1929–2017—Con.**

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

| Area and year                  | All races and origins |      |        | White      |      |        | Black <sup>1</sup> |      |        | Hispanic <sup>2</sup> |      |        | Non-Hispanic white <sup>2</sup> |      |        | Non-Hispanic black <sup>2</sup> |      |        |
|--------------------------------|-----------------------|------|--------|------------|------|--------|--------------------|------|--------|-----------------------|------|--------|---------------------------------|------|--------|---------------------------------|------|--------|
|                                | Both sexes            | Male | Female | Both sexes | Male | Female | Both sexes         | Male | Female | Both sexes            | Male | Female | Both sexes                      | Male | Female | Both sexes                      | Male | Female |
| Death-registration states—Con. |                       |      |        |            |      |        |                    |      |        |                       |      |        |                                 |      |        |                                 |      |        |
| 1920.....                      | 54.1                  | 53.6 | 54.6   | 54.9       | 54.4 | 55.6   | 45.3               | 45.5 | 45.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1919.....                      | 54.7                  | 53.5 | 56.0   | 55.8       | 54.5 | 57.4   | 44.5               | 44.5 | 44.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1918.....                      | 39.1                  | 36.6 | 42.2   | 39.8       | 37.1 | 43.2   | 31.1               | 29.9 | 32.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1917.....                      | 50.9                  | 48.4 | 54.0   | 52.0       | 49.3 | 55.3   | 38.8               | 37.0 | 40.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1916.....                      | 51.7                  | 49.6 | 54.3   | 52.5       | 50.2 | 55.2   | 41.3               | 39.6 | 43.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1915.....                      | 54.5                  | 52.5 | 56.8   | 55.1       | 53.1 | 57.5   | 38.9               | 37.5 | 40.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1914.....                      | 54.2                  | 52.0 | 56.8   | 54.9       | 52.7 | 57.5   | 38.9               | 37.1 | 40.8   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1913.....                      | 52.5                  | 50.3 | 55.0   | 53.0       | 50.8 | 55.7   | 38.4               | 36.7 | 40.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1912.....                      | 53.5                  | 51.5 | 55.9   | 53.9       | 51.9 | 56.2   | 37.9               | 35.9 | 40.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1911.....                      | 52.6                  | 50.9 | 54.4   | 53.0       | 51.3 | 54.9   | 36.4               | 34.6 | 38.2   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1910.....                      | 50.0                  | 48.4 | 51.8   | 50.3       | 48.6 | 52.0   | 35.6               | 33.8 | 37.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1909.....                      | 52.1                  | 50.5 | 53.8   | 52.5       | 50.9 | 54.2   | 35.7               | 34.2 | 37.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1908.....                      | 51.1                  | 49.5 | 52.8   | 51.5       | 49.9 | 53.3   | 34.9               | 33.8 | 36.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1907.....                      | 47.6                  | 45.6 | 49.9   | 48.1       | 46.0 | 50.4   | 32.5               | 31.1 | 34.0   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1906.....                      | 48.7                  | 46.9 | 50.8   | 49.3       | 47.3 | 51.4   | 32.9               | 31.8 | 33.9   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1905.....                      | 48.7                  | 47.3 | 50.2   | 49.1       | 47.6 | 50.6   | 31.3               | 29.6 | 33.1   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1904.....                      | 47.6                  | 46.2 | 49.1   | 48.0       | 46.6 | 49.5   | 30.8               | 29.1 | 32.7   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1903.....                      | 50.5                  | 49.1 | 52.0   | 50.9       | 49.5 | 52.5   | 33.1               | 31.7 | 34.6   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1902.....                      | 51.5                  | 49.8 | 53.4   | 51.9       | 50.2 | 53.8   | 34.6               | 32.9 | 36.4   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1901.....                      | 49.1                  | 47.6 | 50.6   | 49.4       | 48.0 | 51.0   | 33.7               | 32.2 | 35.3   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |
| 1900.....                      | 47.3                  | 46.3 | 48.3   | 47.6       | 46.6 | 48.7   | 33.0               | 32.5 | 33.5   | ---                   | ---  | ---    | ---                             | ---  | ---    | ---                             | ---  | ---    |

--- Data not available.

<sup>1</sup>Before 1970, data for the black population are not available. Data shown for 1900–1969 are for the nonwhite population. See Technical Notes.

<sup>2</sup>Life tables by Hispanic origin are based on death rates that have been adjusted for race and ethnicity misclassification on death certificates. Updated classification ratios were applied to data years 2010–2015; see Technical Notes.

<sup>3</sup>Includes Alaska in 1959 and Hawaii in 1960.

<sup>4</sup>Life expectancies for 2001–2017 were calculated using a revised methodology described in the Technical Notes.

<sup>5</sup>Life expectancies for 2001–2009 have been re-estimated using new intercensal population estimates and may differ from data previously published; see Technical Notes.

<sup>6</sup>Deaths based on a 50% sample.

<sup>7</sup>Figures by race exclude data for residents of New Jersey; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.



**Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017**

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

| Age (years),<br>race, and sex | Number of survivors out of 100,000 born alive, $l_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>All races</b>              |  |           |           |           |           |           |           |           |           |           |           |           |
| 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.....                        | 99,422   | 99,305    | 99,064    | 98,740    | 97,998    | 97,407    | 97,024    | 95,290    | 94,028    | 92,515    | 88,538    | 87,552    |
| 5.....                        | 99,326   | 99,176    | 98,877    | 98,495    | 97,668    | 96,998    | 96,482    | 94,220    | 91,978    | 83,389    | 83,887    | 81,804    |
| 10.....                       | 99,268   | 99,097    | 98,766    | 98,347    | 97,460    | 96,765    | 96,177    | 93,710    | 91,106    | 88,129    | 82,458    | 80,052    |
| 15.....                       | 99,191   | 98,998    | 98,635    | 98,196    | 97,261    | 96,551    | 95,885    | 93,235    | 90,385    | 87,144    | 81,506    | 78,963    |
| 20.....                       | 98,937   | 98,664    | 98,215    | 97,741    | 96,716    | 96,111    | 95,366    | 92,435    | 89,089    | 85,441    | 80,074    | 77,239    |
| 25.....                       | 98,466   | 98,203    | 97,671    | 97,110    | 96,000    | 95,517    | 94,676    | 91,335    | 87,269    | 83,146    | 78,046    | 74,768    |
| 30.....                       | 97,872   | 97,751    | 97,070    | 96,477    | 95,307    | 94,905    | 93,919    | 90,078    | 85,302    | 80,642    | 75,779    | 72,043    |
| 35.....                       | 97,163   | 97,201    | 96,322    | 95,808    | 94,482    | 94,144    | 92,976    | 88,573    | 83,118    | 77,961    | 73,127    | 69,078    |
| 40.....                       | 96,321   | 96,422    | 95,373    | 94,926    | 93,322    | 93,064    | 91,648    | 86,650    | 80,557    | 75,114    | 70,042    | 65,890    |
| 45.....                       | 95,275   | 95,274    | 94,154    | 93,599    | 91,587    | 91,378    | 89,634    | 84,069    | 77,343    | 72,036    | 66,561    | 62,436    |
| 50.....                       | 93,797   | 93,601    | 92,370    | 91,526    | 88,972    | 88,756    | 86,591    | 80,487    | 73,321    | 68,429    | 62,460    | 58,514    |
| 55.....                       | 91,538   | 91,232    | 89,658    | 88,348    | 85,110    | 84,711    | 82,176    | 75,557    | 68,182    | 63,947    | 57,555    | 53,852    |
| 60.....                       | 88,226   | 87,642    | 85,537    | 83,726    | 79,529    | 79,067    | 75,921    | 68,924    | 61,563    | 58,079    | 51,138    | 47,946    |
| 65.....                       | 83,696   | 82,330    | 79,519    | 77,107    | 71,933    | 71,147    | 67,555    | 60,366    | 53,195    | 50,560    | 43,194    | 40,911    |
| 70.....                       | 77,697   | 74,891    | 71,357    | 68,248    | 61,984    | 60,857    | 56,987    | 49,655    | 42,768    | 41,090    | 33,816    | 32,390    |
| 75.....                       | 69,418   | 64,644    | 60,449    | 56,799    | 49,705    | 48,170    | 43,903    | 36,735    | 30,789    | 29,729    | 23,552    | 22,960    |
| 80.....                       | 57,839   | 50,885    | 47,084    | 43,180    | 35,285    | 33,576    | 29,313    | 22,883    | 18,580    | 18,298    | 13,712    | 13,529    |
| 85.....                       | 42,382   | 34,515    | 31,770    | 27,960    | 20,908    | 18,542    | 15,785    | 11,073    | 8,542     | 8,683     | 6,001     | 6,053     |
| 90.....                       | 24,560   | 18,496    | 17,046    | 14,154    | 9,297     | 7,080     | 6,144     | 3,796     | 2,998     | 2,941     | 1,868     | 1,867     |
| 95.....                       | 9,361  | 6,879     | 6,282     | 5,043     | 2,786     | 1,524     | 1,511     | 857       | 636       | 646       | 361       | 344       |
| 100.....                      | 1,894  | 1,479     | 1,424     | 1,150     | 542       | 183       | 199       | 123       | 62        | 67        | 40        | 31        |
| <b>Male</b>                   |  |           |           |           |           |           |           |           |           |           |           |           |
| 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.....                        | 99,370   | 99,239    | 98,961    | 98,607    | 97,755    | 97,087    | 96,661    | 94,762    | 93,440    | 91,745    | 87,505    | 86,426    |
| 5.....                        | 99,261   | 99,095    | 98,754    | 98,333    | 97,395    | 96,643    | 96,077    | 93,624    | 91,294    | 88,505    | 82,718    | 80,548    |
| 10.....                       | 99,199   | 99,008    | 98,627    | 98,160    | 97,151    | 96,375    | 95,726    | 93,054    | 90,346    | 87,184    | 81,249    | 78,775    |
| 15.....                       | 99,107   | 98,890    | 98,464    | 97,972    | 96,904    | 96,107    | 95,366    | 92,508    | 89,561    | 86,156    | 80,261    | 77,681    |
| 20.....                       | 98,749   | 98,426    | 97,854    | 97,316    | 96,126    | 95,491    | 94,695    | 91,617    | 88,220    | 84,440    | 78,792    | 75,984    |
| 25.....                       | 98,071   | 97,747    | 97,049    | 96,361    | 95,040    | 94,631    | 93,791    | 90,385    | 86,359    | 82,252    | 76,675    | 73,472    |
| 30.....                       | 97,235   | 97,114    | 96,166    | 95,430    | 94,072    | 93,826    | 92,861    | 89,009    | 84,346    | 79,890    | 74,378    | 70,747    |
| 35.....                       | 96,284   | 96,385    | 95,091    | 94,501    | 92,997    | 92,889    | 91,760    | 87,371    | 82,075    | 77,514    | 71,614    | 67,752    |
| 40.....                       | 95,196   | 95,389    | 93,761    | 93,345    | 91,541    | 91,572    | 90,207    | 85,246    | 79,357    | 74,432    | 68,297    | 64,447    |
| 45.....                       | 93,903   | 93,940    | 92,139    | 91,649    | 89,369    | 89,492    | 87,819    | 82,336    | 75,882    | 71,244    | 64,518    | 60,849    |
| 50.....                       | 92,105   | 91,818    | 89,865    | 89,007    | 86,070    | 86,199    | 84,158    | 78,254    | 71,518    | 67,553    | 60,118    | 56,736    |
| 55.....                       | 89,365   | 88,897    | 86,492    | 84,936    | 81,139    | 81,039    | 78,781    | 72,627    | 65,981    | 62,965    | 54,970    | 51,939    |
| 60.....                       | 85,344   | 84,551    | 81,378    | 79,012    | 73,958    | 73,887    | 71,246    | 65,142    | 58,909    | 56,917    | 48,343    | 45,895    |
| 65.....                       | 79,838   | 78,241    | 73,971    | 70,646    | 64,318    | 64,177    | 61,566    | 55,776    | 50,154    | 49,218    | 40,264    | 38,736    |
| 70.....                       | 72,785   | 69,491    | 64,107    | 59,681    | 52,296    | 52,244    | 49,950    | 44,588    | 39,516    | 39,668    | 31,023    | 30,217    |
| 75.....                       | 63,524   | 57,688    | 51,385    | 46,272    | 38,797    | 38,950    | 36,756    | 31,864    | 27,718    | 28,316    | 21,213    | 21,076    |
| 80.....                       | 51,095   | 42,769    | 36,749    | 31,810    | 24,921    | 25,300    | 25,237    | 18,995    | 16,172    | 17,128    | 11,942    | 12,084    |
| 85.....                       | 35,439   | 26,527    | 21,815    | 18,020    | 13,168    | 12,845    | 11,750    | 8,693     | 7,107     | 7,920     | 5,059     | 5,179     |
| 90.....                       | 18,687   | 12,473    | 9,878     | 7,732     | 5,107     | 4,609     | 4,197     | 2,787     | 2,283     | 2,527     | 1,502     | 1,508     |
| 95.....                       | 6,070  | 3,855     | 2,927     | 2,279     | 1,326     | 970       | 955       | 586       | 451       | 556       | 289       | 262       |
| 100.....                      | 971  | 645       | 529       | 423       | 222       | 117       | 121       | 78        | 40        | 62        | 33        | 22        |
| <b>Female</b>                 |  |           |           |           |           |           |           |           |           |           |           |           |
| 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.....                        | 99,477   | 99,375    | 99,172    | 98,880    | 98,254    | 97,744    | 97,406    | 95,848    | 94,728    | 93,383    | 89,623    | 88,733    |
| 5.....                        | 99,393   | 99,261    | 99,006    | 98,666    | 97,955    | 97,371    | 96,908    | 94,848    | 92,789    | 90,380    | 85,117    | 83,119    |
| 10.....                       | 99,341   | 99,190    | 98,911    | 98,544    | 97,784    | 97,173    | 96,652    | 94,402    | 92,008    | 89,186    | 83,728    | 81,390    |
| 15.....                       | 99,280   | 99,111    | 98,814    | 98,432    | 97,636    | 97,016    | 96,431    | 94,000    | 91,364    | 88,247    | 82,813    | 80,307    |
| 20.....                       | 99,134   | 98,915    | 98,597    | 98,184    | 97,331    | 96,756    | 96,066    | 93,293    | 90,116    | 86,556    | 81,418    | 78,555    |
| 25.....                       | 98,883   | 98,682    | 98,325    | 97,883    | 96,966    | 96,418    | 95,583    | 92,322    | 88,328    | 84,135    | 79,481    | 76,119    |
| 30.....                       | 98,543   | 98,418    | 98,013    | 97,551    | 96,544    | 95,996    | 94,933    | 91,182    | 86,398    | 81,463    | 77,247    | 73,394    |
| 35.....                       | 98,083   | 98,052    | 97,596    | 97,140    | 95,966    | 95,409    | 94,206    | 89,810    | 84,304    | 78,713    | 74,719    | 70,463    |
| 40.....                       | 97,493   | 97,493    | 97,033    | 96,531    | 95,097    | 94,560    | 93,101    | 88,092    | 81,927    | 75,907    | 71,894    | 67,407    |
| 45.....                       | 96,697   | 96,648    | 96,222    | 95,570    | 93,793    | 93,265    | 91,469    | 85,856    | 79,041    | 72,954    | 68,755    | 64,121    |

See footnotes at end of table.

**Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex | Number of survivors out of 100,000 born alive, $I_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| Female—Con.                   |  |           |           |           |           |           |           |           |           |           |           |           |
| 50. ....                      | 95,543   | 95,425    | 94,932    | 94,060    | 91,852    | 91,327    | 89,075    | 82,828    | 75,456    | 69,452    | 65,001    | 60,415    |
| 55. ....                      | 93,768   | 93,609    | 92,881    | 91,760    | 89,066    | 88,451    | 85,694    | 78,708    | 70,832    | 65,099    | 60,392    | 55,908    |
| 60. ....                      | 91,162   | 90,767    | 89,742    | 88,414    | 85,139    | 84,430    | 80,890    | 73,093    | 64,795    | 59,438    | 54,226    | 50,155    |
| 65. ....                      | 87,596   | 86,433    | 85,075    | 83,520    | 79,698    | 78,462    | 74,119    | 65,523    | 56,924    | 52,126    | 46,438    | 43,246    |
| 70. ....                      | 82,637   | 80,219    | 78,522    | 76,720    | 71,955    | 70,100    | 64,873    | 55,449    | 46,774    | 42,741    | 36,916    | 34,721    |
| 75. ....                      | 75,344   | 71,311    | 69,287    | 67,186    | 61,107    | 58,394    | 52,111    | 42,425    | 34,600    | 31,344    | 26,155    | 24,994    |
| 80. ....                      | 64,591   | 58,455    | 56,986    | 54,372    | 46,445    | 43,063    | 36,486    | 27,524    | 21,578    | 19,613    | 15,682    | 15,129    |
| 85. ....                      | 49,264   | 41,830    | 41,115    | 37,772    | 29,538    | 25,269    | 20,668    | 13,972    | 10,322    | 9,515     | 7,051     | 7,063     |
| 90. ....                      | 30,222   | 23,936    | 23,666    | 20,578    | 14,160    | 10,056    | 8,548     | 5,044     | 3,656     | 3,314     | 2,269     | 2,306     |
| 95. ....                      | 12,383   | 9,560     | 9,346     | 7,862     | 4,565     | 2,193     | 2,207     | 1,195     | 807       | 728       | 441       | 452       |
| 100. ....                     | 2,697  | 2,183     | 2,251     | 1,927     | 954       | 264       | 298       | 179       | 82        | 72        | 49        | 43        |
| White                         |  |           |           |           |           |           |           |           |           |           |           |           |
| 0. ....                       | 100,000  | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   |
| 1. ....                       | 99,516   | 99,429    | 99,233    | 98,898    | 98,224    | 97,714    | 97,278    | 95,685    | 94,392    | 92,780    | 88,709    | 87,762    |
| 5. ....                       | 99,429   | 99,313    | 99,068    | 98,675    | 97,930    | 97,353    | 96,790    | 94,713    | 92,466    | 89,771    | 84,147    | 82,071    |
| 10. ....                      | 99,377   | 99,239    | 98,966    | 98,536    | 97,733    | 97,131    | 96,502    | 94,228    | 91,627    | 88,536    | 82,734    | 80,371    |
| 15. ....                      | 99,304   | 99,146    | 98,843    | 98,391    | 97,546    | 96,928    | 96,228    | 93,792    | 90,982    | 87,633    | 81,816    | 79,344    |
| 20. ....                      | 99,066   | 98,826    | 98,455    | 97,939    | 97,036    | 96,508    | 95,763    | 93,117    | 89,933    | 86,159    | 80,407    | 77,998    |
| 25. ....                      | 98,613   | 98,406    | 97,972    | 97,340    | 96,406    | 95,965    | 95,169    | 92,213    | 88,454    | 84,106    | 78,392    | 75,202    |
| 30. ....                      | 98,025   | 98,000    | 97,451    | 96,774    | 95,824    | 95,440    | 94,536    | 91,185    | 86,836    | 81,787    | 76,167    | 72,317    |
| 35. ....                      | 97,312   | 97,506    | 96,810    | 96,192    | 95,152    | 94,798    | 93,750    | 89,941    | 85,004    | 79,277    | 73,568    | 69,522    |
| 40. ....                      | 96,477   | 96,799    | 96,000    | 95,427    | 94,190    | 93,870    | 92,616    | 88,318    | 82,803    | 76,642    | 70,525    | 66,082    |
| 45. ....                      | 95,447   | 95,759    | 94,932    | 94,257    | 92,681    | 92,374    | 90,847    | 86,069    | 79,989    | 73,705    | 67,090    | 62,920    |
| 50. ....                      | 93,997   | 94,242    | 93,326    | 92,384    | 90,306    | 89,958    | 88,110    | 82,833    | 76,340    | 70,250    | 62,994    | 58,647    |
| 55. ....                      | 91,783   | 92,050    | 90,833    | 89,427    | 86,688    | 86,173    | 84,027    | 78,218    | 71,551    | 65,875    | 58,163    | 54,450    |
| 60. ....                      | 88,554   | 88,655    | 86,943    | 85,031    | 81,323    | 80,811    | 78,066    | 71,785    | 65,100    | 60,013    | 51,822    | 48,288    |
| 65. ....                      | 84,141   | 83,518    | 81,123    | 78,585    | 73,889    | 73,102    | 69,850    | 63,201    | 56,655    | 52,411    | 43,904    | 41,505    |
| 70. ....                      | 78,242   | 76,219    | 73,106    | 69,801    | 63,991    | 62,834    | 59,189    | 52,165    | 45,841    | 42,736    | 34,484    | 32,902    |
| 75. ....                      | 69,933   | 66,022    | 62,175    | 58,299    | 51,586    | 49,895    | 45,688    | 38,610    | 33,406    | 31,086    | 24,151    | 23,356    |
| 80. ....                      | 58,237   | 52,160    | 48,583    | 44,409    | 36,659    | 34,697    | 30,438    | 23,976    | 20,260    | 19,149    | 14,100    | 13,794    |
| 85. ....                      | 42,559   | 35,461    | 32,850    | 28,768    | 21,578    | 19,017    | 16,239    | 11,483    | 9,325     | 9,078     | 6,178     | 6,192     |
| 90. ....                      | 24,480   | 18,964    | 17,571    | 14,471    | 9,433     | 7,149     | 6,201     | 3,819     | 3,066     | 2,991     | 1,918     | 1,919     |
| 95. ....                      | 9,125  | 6,971     | 6,416     | 5,067     | 2,743     | 1,521     | 1,500     | 801       | 636       | 643       | 364       | 355       |
| 100. ....                     | 1,761  | 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. ....                       | 99,473   | 99,373    | 99,138    | 98,769    | 97,994    | 97,408    | 96,931    | 95,188    | 93,768    | 91,975    | 87,674    | 86,655    |
| 5. ....                       | 99,373   | 99,243    | 98,956    | 98,519    | 97,671    | 97,015    | 96,403    | 94,150    | 91,738    | 88,842    | 82,972    | 80,864    |
| 10. ....                      | 99,316   | 99,163    | 98,839    | 98,357    | 97,441    | 96,758    | 96,069    | 93,601    | 90,810    | 87,530    | 81,519    | 79,109    |
| 15. ....                      | 99,230   | 99,052    | 98,686    | 98,176    | 97,208    | 96,503    | 95,728    | 93,089    | 90,074    | 86,546    | 80,549    | 78,037    |
| 20. ....                      | 98,906   | 98,616    | 98,134    | 97,525    | 96,480    | 95,908    | 95,104    | 92,293    | 88,904    | 84,997    | 79,116    | 76,376    |
| 25. ....                      | 98,262   | 98,003    | 97,430    | 96,616    | 95,524    | 95,106    | 94,294    | 91,241    | 87,371    | 83,061    | 77,047    | 73,907    |
| 30. ....                      | 97,439   | 97,436    | 96,662    | 95,783    | 94,716    | 94,401    | 93,489    | 90,092    | 85,707    | 80,888    | 74,810    | 71,219    |
| 35. ....                      | 96,493   | 96,774    | 95,731    | 94,980    | 93,843    | 93,589    | 92,543    | 88,713    | 83,812    | 78,441    | 72,108    | 68,245    |
| 40. ....                      | 95,422   | 95,859    | 94,588    | 93,984    | 92,631    | 92,427    | 91,173    | 86,880    | 81,457    | 75,733    | 68,848    | 64,954    |
| 45. ....                      | 94,151   | 94,530    | 93,167    | 92,494    | 90,725    | 90,533    | 89,002    | 84,285    | 78,345    | 72,696    | 65,115    | 61,369    |
| 50. ....                      | 92,391   | 92,588    | 91,124    | 90,105    | 87,690    | 87,424    | 85,601    | 80,521    | 74,288    | 69,107    | 60,741    | 57,274    |
| 55. ....                      | 89,701   | 89,883    | 88,022    | 86,303    | 83,001    | 82,463    | 80,496    | 75,156    | 68,981    | 64,574    | 55,622    | 52,491    |
| 60. ....                      | 85,778   | 85,773    | 83,182    | 80,625    | 75,969    | 75,485    | 73,172    | 67,787    | 61,933    | 58,498    | 48,987    | 46,452    |
| 65. ....                      | 80,425   | 79,657    | 75,962    | 72,393    | 66,343    | 65,834    | 63,541    | 58,305    | 52,964    | 50,663    | 40,862    | 39,245    |
| 70. ....                      | 73,517   | 71,039    | 66,181    | 61,384    | 54,138    | 53,825    | 51,735    | 46,739    | 41,880    | 40,873    | 31,527    | 30,640    |
| 75. ....                      | 64,248   | 59,245    | 53,308    | 47,712    | 40,324    | 40,207    | 38,104    | 33,404    | 29,471    | 29,205    | 21,585    | 21,387    |
| 80. ....                      | 51,682   | 44,121    | 38,245    | 32,788    | 25,885    | 25,993    | 24,005    | 19,860    | 17,221    | 17,655    | 12,160    | 12,266    |
| 85. ....                      | 35,762   | 27,425    | 22,720    | 18,538    | 13,527    | 13,065    | 12,015    | 9,013     | 7,572     | 8,154     | 5,145     | 5,252     |
| 90. ....                      | 18,708   | 12,840    | 10,214    | 7,891     | 5,125     | 4,600     | 4,209     | 2,812     | 2,356     | 2,568     | 1,523     | 1,523     |
| 95. ....                      | 5,903  | 3,899     | 2,988     | 2,279     | 1,274     | 956       | 942       | 552       | 461       | 556       | 289       | 263       |
| 100. ....                     | 886  | 625       | 523       | 404       | 189       | 115       | 118       | 65        | 40        | 61        | 31        | 22        |

See footnotes at end of table.

**Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex | Number of survivors out of 100,000 born alive, $l_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>White female</b>           |  |           |           |           |           |           |           |           |           |           |           |           |
| 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                             | 99,562   | 99,488    | 99,333    | 99,035    | 98,468    | 98,036    | 97,645    | 96,211    | 95,037    | 93,608    | 89,774    | 88,939    |
| 5                             | 99,489   | 99,385    | 99,187    | 98,841    | 98,203    | 97,709    | 97,199    | 95,309    | 93,216    | 90,721    | 85,349    | 83,426    |
| 10                            | 99,440   | 99,319    | 99,099    | 98,725    | 98,042    | 97,525    | 96,960    | 94,890    | 92,466    | 89,564    | 83,979    | 81,723    |
| 15                            | 99,382   | 99,245    | 99,007    | 98,618    | 97,902    | 97,375    | 96,756    | 94,534    | 91,894    | 88,712    | 83,093    | 80,680    |
| 20                            | 99,235   | 99,049    | 98,795    | 98,374    | 97,618    | 97,135    | 96,454    | 93,984    | 90,939    | 87,281    | 81,750    | 78,978    |
| 25                            | 98,987   | 98,835    | 98,547    | 98,093    | 97,299    | 96,844    | 96,072    | 93,228    | 89,524    | 85,163    | 79,865    | 76,588    |
| 30                            | 98,646   | 98,602    | 98,283    | 97,802    | 96,945    | 96,499    | 95,605    | 92,320    | 87,972    | 82,740    | 77,676    | 73,887    |
| 35                            | 98,180   | 98,282    | 97,939    | 97,445    | 96,474    | 96,026    | 94,977    | 91,211    | 86,248    | 80,206    | 75,200    | 70,971    |
| 40                            | 97,593   | 97,790    | 97,472    | 96,913    | 95,762    | 95,326    | 94,080    | 89,805    | 84,256    | 77,624    | 72,425    | 67,935    |
| 45                            | 96,814   | 97,049    | 96,768    | 96,065    | 94,649    | 94,228    | 92,725    | 87,920    | 81,780    | 74,871    | 69,341    | 64,677    |
| 50                            | 95,687   | 95,962    | 95,608    | 94,710    | 92,924    | 92,522    | 90,685    | 85,267    | 78,572    | 71,547    | 65,629    | 61,005    |
| 55                            | 93,962   | 94,293    | 93,730    | 92,594    | 90,383    | 89,967    | 87,699    | 81,520    | 74,321    | 67,323    | 61,053    | 56,509    |
| 60                            | 91,438   | 91,615    | 90,789    | 89,451    | 86,726    | 86,339    | 83,279    | 76,200    | 68,462    | 61,704    | 54,900    | 50,752    |
| 65                            | 87,973   | 87,449    | 86,339    | 84,764    | 81,579    | 80,739    | 76,773    | 68,701    | 60,499    | 54,299    | 47,086    | 43,806    |
| 70                            | 83,087   | 81,400    | 79,984    | 78,139    | 74,101    | 72,507    | 67,545    | 58,363    | 49,932    | 44,638    | 37,482    | 35,206    |
| 75                            | 75,748   | 72,595    | 70,834    | 68,712    | 63,290    | 60,461    | 54,397    | 44,685    | 37,024    | 32,777    | 26,569    | 25,362    |
| 80                            | 64,899   | 59,721    | 58,454    | 55,770    | 48,182    | 44,676    | 38,026    | 28,882    | 23,053    | 20,492    | 15,929    | 15,349    |
| 85                            | 49,376   | 42,848    | 42,274    | 38,774    | 30,490    | 26,046    | 21,348    | 14,487    | 10,937    | 9,909     | 7,152     | 7,149     |
| 90                            | 30,103   | 24,491    | 24,270    | 20,996    | 14,406    | 10,219    | 8,662     | 5,061     | 3,719     | 3,372     | 2,291     | 2,322     |
| 95                            | 12,097   | 9,680     | 9,495     | 7,900     | 4,526     | 2,203     | 2,200     | 1,109     | 797       | 721       | 434       | 448       |
| 100                           | 2,524  | 2,147     | 2,239     | 1,858     | 872       | 265       | 294       | 139       | 74        | 63        | 44        | 41        |
| <b>Black<sup>1</sup></b>      |  |           |           |           |           |           |           |           |           |           |           |           |
| 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                             | 98,920   | 98,578    | 98,187    | 97,885    | 96,731    | 95,732    | 95,407    | 92,584    | 92,035    | 90,379    | 79,784    | 76,609    |
| 5                             | 98,771   | 98,382    | 97,884    | 97,522    | 96,207    | 95,051    | 94,482    | 90,983    | 89,303    | 86,174    | 70,691    | 66,222    |
| 10                            | 98,686   | 98,271    | 97,720    | 97,322    | 95,928    | 94,745    | 94,060    | 90,339    | 88,258    | 84,690    | 68,437    | 63,410    |
| 15                            | 98,578   | 98,139    | 97,539    | 97,134    | 95,661    | 94,460    | 93,646    | 89,591    | 87,156    | 83,180    | 66,410    | 61,060    |
| 20                            | 98,208   | 97,701    | 96,925    | 96,652    | 94,887    | 93,880    | 92,738    | 87,839    | 84,386    | 79,641    | 63,165    | 57,931    |
| 25                            | 97,555   | 96,946    | 95,972    | 95,804    | 93,513    | 92,925    | 91,321    | 85,210    | 80,320    | 74,973    | 59,608    | 54,512    |
| 30                            | 96,763   | 96,143    | 94,809    | 94,680    | 91,934    | 91,699    | 89,584    | 82,194    | 75,962    | 70,492    | 56,112    | 51,287    |
| 35                            | 95,837   | 95,164    | 93,260    | 93,288    | 89,977    | 90,046    | 87,402    | 78,683    | 71,141    | 65,865    | 52,125    | 48,007    |
| 40                            | 94,682   | 93,809    | 91,239    | 91,439    | 87,304    | 87,766    | 84,478    | 74,466    | 65,974    | 61,244    | 47,866    | 44,518    |
| 45                            | 93,210   | 91,770    | 88,689    | 88,834    | 83,700    | 84,501    | 80,507    | 69,284    | 59,827    | 56,442    | 43,054    | 40,628    |
| 50                            | 91,184   | 88,761    | 85,285    | 85,044    | 78,938    | 80,172    | 74,976    | 62,702    | 53,141    | 51,422    | 37,800    | 36,103    |
| 55                            | 88,154   | 84,657    | 80,635    | 79,816    | 72,826    | 73,893    | 67,660    | 54,846    | 45,558    | 45,803    | 32,233    | 31,404    |
| 60                            | 83,613   | 79,007    | 74,335    | 72,913    | 65,250    | 65,795    | 58,593    | 46,318    | 37,654    | 39,418    | 26,046    | 25,698    |
| 65                            | 77,385   | 71,704    | 66,154    | 64,391    | 56,102    | 56,038    | 48,649    | 37,838    | 30,015    | 32,738    | 19,806    | 20,474    |
| 70                            | 69,560   | 62,349    | 56,192    | 54,617    | 45,785    | 45,434    | 38,616    | 29,654    | 22,505    | 25,585    | 14,021    | 14,960    |
| 75                            | 60,137   | 50,987    | 44,872    | 43,274    | 34,262    | 34,531    | 28,968    | 21,798    | 15,546    | 18,011    | 9,139     | 9,956     |
| 80                            | 48,332   | 37,964    | 33,149    | 31,711    | 23,710    | 24,815    | 20,003    | 14,408    | 9,589     | 11,376    | 5,158     | 5,750     |
| 85                            | 34,458   | 24,677    | 21,352    | 19,939    | 15,044    | 15,337    | 12,433    | 8,326     | 4,900     | 5,794     | 2,414     | 2,782     |
| 90                            | 20,106   | 13,204    | 11,646    | 10,713    | 8,087     | 7,195     | 6,394     | 4,077     | 2,044     | 2,317     | 913       | 1,054     |
| 95                            | 8,620  | 5,368     | 4,729     | 4,463     | 3,252     | 1,777     | 2,010     | 1,557     | 638       | 689       | 324       | 296       |
| 100                           | 2,390  | 1,491     | 1,376     | 1,360     | 1,036     | 214       | 301       | 399       | 120       | 129       | 77        | 57        |
| <b>Black male<sup>1</sup></b> |  |           |           |           |           |           |           |           |           |           |           |           |
| 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                             | 98,812   | 98,437    | 98,023    | 97,703    | 96,394    | 95,301    | 94,911    | 91,772    | 91,268    | 89,499    | 78,065    | 74,674    |
| 5                             | 98,653   | 98,219    | 97,688    | 97,300    | 95,826    | 94,570    | 93,921    | 90,082    | 88,412    | 85,195    | 68,589    | 64,385    |
| 10                            | 98,560   | 98,093    | 97,501    | 97,061    | 95,497    | 94,234    | 93,453    | 89,393    | 87,311    | 83,768    | 66,377    | 61,730    |
| 15                            | 98,425   | 97,930    | 97,268    | 96,826    | 95,161    | 93,874    | 92,965    | 88,610    | 86,152    | 82,332    | 64,478    | 59,667    |
| 20                            | 97,853   | 97,275    | 96,301    | 96,132    | 94,053    | 93,108    | 91,941    | 86,968    | 83,621    | 79,057    | 61,426    | 56,733    |
| 25                            | 96,871   | 96,103    | 94,809    | 94,827    | 91,904    | 91,825    | 90,285    | 84,227    | 79,516    | 74,540    | 57,736    | 53,285    |
| 30                            | 95,718   | 94,940    | 93,070    | 93,125    | 89,584    | 90,270    | 88,327    | 80,979    | 75,083    | 70,344    | 54,073    | 49,867    |
| 35                            | 94,433   | 93,641    | 90,827    | 91,080    | 86,885    | 88,331    | 85,940    | 77,221    | 70,049    | 65,873    | 49,865    | 46,541    |
| 40                            | 92,897   | 91,945    | 87,948    | 88,490    | 83,441    | 85,744    | 82,832    | 72,780    | 64,710    | 61,353    | 45,414    | 42,989    |
| 45                            | 91,066   | 89,439    | 84,467    | 84,997    | 78,976    | 82,075    | 78,686    | 67,346    | 58,432    | 56,589    | 40,563    | 39,230    |

See footnotes at end of table.

**Table 20. Survivorship, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex      | Number of survivors out of 100,000 born alive, $l_x$ |           |           |           |           |           |           |           |           |           |           |           |
|------------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                    | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>Black male<sup>1</sup>—Con.</b> |  |           |           |           |           |           |           |           |           |           |           |           |
| 50.....                            | 88,591   | 85,653    | 79,984    | 80,065    | 73,282    | 77,239    | 72,891    | 60,495    | 51,748    | 51,880    | 35,427    | 34,766    |
| 55.....                            | 84,962   | 80,529    | 74,095    | 73,413    | 66,101    | 70,351    | 65,122    | 52,426    | 44,436    | 46,581    | 29,754    | 29,987    |
| 60.....                            | 79,494   | 73,588    | 66,334    | 64,980    | 57,457    | 61,669    | 55,535    | 43,833    | 36,790    | 40,506    | 23,750    | 24,194    |
| 65.....                            | 71,895   | 64,980    | 56,795    | 55,061    | 47,485    | 51,392    | 45,198    | 35,371    | 29,314    | 34,042    | 17,806    | 19,015    |
| 70.....                            | 62,551   | 54,253    | 45,690    | 44,213    | 36,925    | 39,914    | 35,018    | 27,236    | 21,741    | 26,923    | 12,295    | 13,829    |
| 75.....                            | 51,909   | 41,693    | 33,755    | 32,717    | 25,921    | 29,064    | 25,472    | 19,456    | 14,419    | 18,854    | 7,494     | 8,892     |
| 80.....                            | 39,528   | 28,497    | 22,549    | 22,017    | 16,560    | 19,994    | 16,904    | 12,186    | 8,239     | 11,615    | 3,894     | 4,831     |
| 85.....                            | 26,042   | 16,532    | 12,709    | 12,383    | 9,648     | 11,620    | 9,898     | 6,444     | 3,660     | 5,605     | 1,747     | 2,030     |
| 90.....                            | 13,662   | 7,625     | 5,972     | 5,708     | 4,696     | 5,174     | 4,642     | 2,836     | 1,246     | 2,040     | 595       | 634       |
| 95.....                            | 5,016  | 2,565     | 1,971     | 2,009     | 1,721     | 1,240     | 1,342     | 961       | 307       | 552       | 189       | 137       |
| 100.....                           | 1,128  | 563       | 466       | 513       | 489       | 149       | 192       | 209       | 41        | 77        | 40        | 18        |
| <b>Black female<sup>1</sup></b>    |  |           |           |           |           |           |           |           |           |           |           |           |
| 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.....                             | 99,033   | 98,723    | 98,356    | 98,073    | 97,076    | 96,172    | 95,913    | 93,416    | 92,796    | 91,251    | 81,493    | 78,525    |
| 5.....                             | 98,894   | 98,550    | 98,087    | 97,751    | 96,598    | 95,543    | 95,055    | 91,906    | 90,185    | 87,149    | 72,768    | 68,056    |
| 10.....                            | 98,815   | 98,456    | 97,946    | 97,590    | 96,369    | 95,265    | 94,679    | 91,308    | 89,201    | 85,607    | 70,508    | 65,111    |
| 15.....                            | 98,736   | 98,354    | 97,818    | 97,450    | 96,172    | 95,057    | 94,343    | 90,594    | 88,088    | 83,954    | 68,218    | 62,384    |
| 20.....                            | 98,576   | 98,141    | 97,566    | 97,180    | 95,729    | 94,660    | 93,544    | 88,736    | 85,078    | 80,154    | 64,764    | 59,053    |
| 25.....                            | 98,267   | 97,785    | 97,140    | 96,754    | 95,035    | 94,005    | 92,336    | 86,198    | 81,067    | 75,359    | 61,430    | 55,795    |
| 30.....                            | 97,843   | 97,314    | 96,514    | 96,150    | 94,114    | 93,070    | 90,799    | 83,384    | 76,816    | 70,633    | 58,281    | 52,773    |
| 35.....                            | 97,263   | 96,632    | 95,599    | 95,338    | 92,807    | 91,670    | 88,805    | 80,092    | 72,192    | 65,857    | 54,595    | 49,567    |
| 40.....                            | 96,464   | 95,588    | 94,364    | 94,137    | 90,817    | 89,676    | 86,052    | 76,084    | 67,271    | 61,130    | 50,568    | 46,146    |
| 45.....                            | 95,322   | 93,979    | 92,676    | 92,322    | 88,001    | 86,793    | 82,257    | 71,157    | 61,365    | 56,230    | 45,947    | 42,279    |
| 50.....                            | 93,711   | 91,680    | 90,277    | 89,563    | 84,168    | 82,979    | 77,007    | 64,885    | 54,920    | 50,780    | 40,886    | 37,681    |
| 55.....                            | 91,241   | 88,517    | 86,793    | 85,653    | 79,177    | 77,362    | 70,196    | 57,314    | 47,074    | 44,742    | 35,415    | 33,124    |
| 60.....                            | 87,562   | 84,044    | 81,886    | 80,293    | 72,820    | 69,941    | 61,758    | 48,928    | 38,761    | 37,954    | 28,908    | 27,524    |
| 65.....                            | 82,583   | 77,941    | 75,031    | 73,266    | 64,716    | 60,825    | 52,358    | 40,504    | 30,852    | 31,044    | 22,302    | 21,995    |
| 70.....                            | 76,127   | 69,778    | 66,278    | 64,729    | 54,873    | 51,274    | 42,612    | 32,354    | 23,341    | 24,107    | 15,871    | 16,140    |
| 75.....                            | 67,819   | 59,361    | 55,684    | 53,831    | 43,193    | 40,540    | 32,981    | 24,502    | 16,576    | 17,216    | 10,657    | 11,066    |
| 80.....                            | 56,516   | 46,453    | 43,622    | 41,686    | 31,756    | 30,315    | 23,712    | 17,039    | 10,822    | 11,151    | 6,324     | 6,708     |
| 85.....                            | 42,199   | 32,053    | 30,089    | 28,004    | 21,358    | 19,744    | 15,550    | 10,622    | 6,033     | 5,972     | 3,029     | 3,567     |
| 90.....                            | 26,129   | 18,347    | 17,536    | 16,260    | 12,210    | 9,675     | 8,590     | 5,652     | 2,774     | 2,579     | 1,206     | 1,492     |
| 95.....                            | 11,754   | 7,989     | 7,687     | 7,312     | 5,217     | 2,438     | 2,875     | 2,345     | 941       | 818       | 448       | 462       |
| 100.....                           | 3,289  | 2,351     | 2,364     | 2,398     | 1,803     | 293       | 445       | 659       | 193       | 179       | 112       | 97        |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017**

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

| Age (years),<br>race, and sex | Average number of years of life remaining, $e_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>All races</b>              |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 78.61  | 76.86     | 75.37     | 73.88     | 70.75     | 69.89     | 68.07     | 63.62     | 59.20     | 56.40     | 51.49     | 49.24     |
| 1.....                        | 78.06  | 76.40     | 75.08     | 73.82     | 71.19     | 70.75     | 69.16     | 65.76     | 61.94     | 59.94     | 57.11     | 55.20     |
| 5.....                        | 74.14  | 72.49     | 71.22     | 70.00     | 67.43     | 67.04     | 65.54     | 62.49     | 59.29     | 57.99     | 56.21     | 54.98     |
| 10.....                       | 69.18  | 67.55     | 66.29     | 65.10     | 62.57     | 62.19     | 60.74     | 57.82     | 54.84     | 53.79     | 52.15     | 51.14     |
| 15.....                       | 64.23  | 62.61     | 61.38     | 60.19     | 57.69     | 57.33     | 55.91     | 53.10     | 50.25     | 49.37     | 47.73     | 46.81     |
| 20.....                       | 59.39  | 57.82     | 56.63     | 55.46     | 53.00     | 52.58     | 51.20     | 48.54     | 45.94     | 45.30     | 43.53     | 42.79     |
| 25.....                       | 54.66  | 53.08     | 51.93     | 50.81     | 48.37     | 47.89     | 46.56     | 44.09     | 41.85     | 41.47     | 39.60     | 39.12     |
| 30.....                       | 49.98  | 48.31     | 47.23     | 46.12     | 43.71     | 43.18     | 41.91     | 39.67     | 37.75     | 37.68     | 35.70     | 35.51     |
| 35.....                       | 45.32  | 43.57     | 42.58     | 41.43     | 39.07     | 38.51     | 37.31     | 35.30     | 33.68     | 33.89     | 31.90     | 31.92     |
| 40.....                       | 40.70  | 38.90     | 37.98     | 36.79     | 34.52     | 33.92     | 32.81     | 31.03     | 29.67     | 30.08     | 28.20     | 28.34     |
| 45.....                       | 36.11  | 34.34     | 33.44     | 32.27     | 30.12     | 29.50     | 28.49     | 26.90     | 25.79     | 26.25     | 24.54     | 24.77     |
| 50.....                       | 31.64  | 29.90     | 29.03     | 27.94     | 25.93     | 25.29     | 24.40     | 22.98     | 22.06     | 22.50     | 20.98     | 21.26     |
| 55.....                       | 27.36  | 25.61     | 24.83     | 23.85     | 21.99     | 21.37     | 20.57     | 19.31     | 18.53     | 18.90     | 17.55     | 17.88     |
| 60.....                       | 23.28  | 21.55     | 20.90     | 20.02     | 18.34     | 17.71     | 17.04     | 15.91     | 15.24     | 15.54     | 14.42     | 14.76     |
| 65.....                       | 19.40  | 17.77     | 17.28     | 16.51     | 15.00     | 14.39     | 13.83     | 12.80     | 12.23     | 12.47     | 11.60     | 11.86     |
| 70.....                       | 15.70  | 14.27     | 13.96     | 13.32     | 12.00     | 11.38     | 10.92     | 10.00     | 9.58      | 9.74      | 9.11      | 9.30      |
| 75.....                       | 12.26  | 11.12     | 11.00     | 10.48     | 9.32      | 8.71      | 8.40      | 7.62      | 7.32      | 7.49      | 6.99      | 7.08      |
| 80.....                       | 9.18   | 8.42      | 8.40      | 7.98      | 7.10      | 6.39      | 6.34      | 5.73      | 5.50      | 5.63      | 5.25      | 5.30      |
| 85.....                       | 6.58   | 6.22      | 6.23      | 5.96      | 5.28      | 4.58      | 4.69      | 4.31      | 4.19      | 4.21      | 4.00      | 3.96      |
| 90.....                       | 4.54   | 4.49      | 4.50      | 4.43      | 3.94      | 3.22      | 3.44      | 3.30      | 3.15      | 3.22      | 3.03      | 2.95      |
| 95.....                       | 3.11   | 3.19      | 3.29      | 3.34      | 3.06      | 2.43      | 2.54      | 2.61      | 2.26      | 2.32      | 2.35      | 2.18      |
| 100.....                      | 2.19   | 2.27      | 2.46      | 2.73      | 2.62      | 1.91      | 1.92      | 2.13      | 1.51      | 1.53      | 1.85      | 1.58      |
| <b>Male</b>                   |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 76.10  | 74.13     | 71.83     | 70.11     | 67.04     | 66.80     | 65.47     | 61.60     | 57.71     | 55.50     | 49.86     | 47.88     |
| 1.....                        | 75.58  | 73.70     | 71.58     | 70.10     | 67.58     | 67.80     | 66.73     | 64.00     | 60.75     | 59.47     | 55.95     | 54.35     |
| 5.....                        | 71.66  | 69.80     | 67.73     | 66.29     | 63.82     | 64.10     | 63.12     | 60.76     | 58.14     | 57.60     | 55.11     | 54.22     |
| 10.....                       | 66.71  | 64.86     | 62.81     | 61.41     | 58.98     | 59.27     | 58.35     | 56.12     | 53.75     | 53.44     | 51.07     | 50.39     |
| 15.....                       | 61.77  | 59.94     | 57.91     | 56.52     | 54.12     | 54.43     | 53.56     | 51.43     | 49.18     | 49.05     | 46.66     | 46.06     |
| 20.....                       | 56.98  | 55.21     | 53.25     | 51.88     | 49.54     | 49.77     | 48.92     | 46.91     | 44.88     | 44.99     | 42.48     | 42.03     |
| 25.....                       | 52.36  | 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.....                       | 43.23  | 41.21     | 39.57     | 38.20     | 35.95     | 35.94     | 35.23     | 33.79     | 32.65     | 33.43     | 30.94     | 31.19     |
| 40.....                       | 38.69  | 36.62     | 35.09     | 33.64     | 31.48     | 31.42     | 30.79     | 29.57     | 28.68     | 29.63     | 27.32     | 27.65     |
| 45.....                       | 34.19  | 32.14     | 30.66     | 29.22     | 27.18     | 27.09     | 26.55     | 25.52     | 24.87     | 25.84     | 23.77     | 24.14     |
| 50.....                       | 29.81  | 27.82     | 26.37     | 25.00     | 23.12     | 23.02     | 22.59     | 21.72     | 21.25     | 22.11     | 20.32     | 20.70     |
| 55.....                       | 25.64  | 23.65     | 22.30     | 21.08     | 19.36     | 19.32     | 18.96     | 18.20     | 17.79     | 18.53     | 16.98     | 17.38     |
| 60.....                       | 21.72  | 19.73     | 18.53     | 17.46     | 15.99     | 15.94     | 15.68     | 14.99     | 14.62     | 15.22     | 13.95     | 14.33     |
| 65.....                       | 18.04  | 16.11     | 15.12     | 14.21     | 12.99     | 12.95     | 12.74     | 12.07     | 11.72     | 12.20     | 11.24     | 11.50     |
| 70.....                       | 14.54  | 12.80     | 12.05     | 11.35     | 10.39     | 10.33     | 10.11     | 9.46      | 9.18      | 9.52      | 8.83      | 9.02      |
| 75.....                       | 11.28  | 9.89      | 9.39      | 8.90      | 8.13      | 7.99      | 7.83      | 7.22      | 7.02      | 7.31      | 6.75      | 6.84      |
| 80.....                       | 8.38   | 7.44      | 7.12      | 6.80      | 6.27      | 5.95      | 5.94      | 5.44      | 5.27      | 5.49      | 5.10      | 5.11      |
| 85.....                       | 5.95   | 5.47      | 5.31      | 5.13      | 4.73      | 4.39      | 4.41      | 4.11      | 4.02      | 4.10      | 3.90      | 3.82      |
| 90.....                       | 4.06   | 3.95      | 3.89      | 3.89      | 3.60      | 3.18      | 3.30      | 3.17      | 3.06      | 3.21      | 3.01      | 2.86      |
| 95.....                       | 2.78   | 2.82      | 2.92      | 2.98      | 2.82      | 2.43      | 2.49      | 2.52      | 2.21      | 2.38      | 2.36      | 2.13      |
| 100.....                      | 1.98   | 2.03      | 2.25      | 2.49      | 2.43      | 1.91      | 1.92      | 2.05      | 1.50      | 1.58      | 1.81      | 1.55      |
| <b>Female</b>                 |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 81.10  | 79.47     | 78.81     | 77.62     | 74.64     | 73.24     | 70.96     | 65.89     | 60.90     | 57.40     | 53.24     | 50.70     |
| 1.....                        | 80.53  | 78.97     | 78.47     | 77.50     | 74.97     | 73.93     | 71.84     | 67.73     | 65.37     | 60.45     | 58.37     | 56.10     |
| 5.....                        | 76.60  | 75.06     | 74.60     | 73.67     | 71.19     | 70.21     | 68.21     | 64.43     | 60.66     | 58.41     | 57.39     | 55.80     |
| 10.....                       | 71.64  | 70.11     | 69.67     | 68.75     | 66.31     | 65.35     | 63.38     | 59.73     | 56.16     | 54.16     | 53.31     | 51.94     |
| 15.....                       | 66.68  | 65.16     | 64.73     | 63.83     | 61.41     | 60.45     | 58.52     | 54.97     | 51.54     | 49.71     | 48.87     | 47.60     |
| 20.....                       | 61.77  | 60.29     | 59.87     | 58.98     | 56.59     | 55.60     | 53.73     | 50.37     | 47.21     | 45.63     | 44.66     | 43.60     |
| 25.....                       | 56.92  | 55.42     | 55.03     | 54.16     | 51.80     | 50.79     | 48.99     | 45.87     | 43.11     | 41.86     | 40.69     | 39.92     |
| 30.....                       | 52.11  | 50.57     | 50.19     | 49.33     | 47.01     | 46.00     | 44.28     | 41.41     | 39.02     | 38.15     | 36.79     | 36.30     |
| 35.....                       | 47.34  | 45.75     | 45.40     | 44.53     | 42.28     | 41.27     | 39.63     | 37.01     | 34.92     | 34.40     | 32.95     | 32.71     |
| 40.....                       | 42.61  | 40.99     | 40.65     | 39.80     | 37.64     | 36.61     | 35.06     | 32.68     | 30.86     | 30.58     | 29.15     | 29.08     |
| 45.....                       | 37.94  | 36.33     | 35.97     | 35.17     | 33.13     | 32.09     | 30.64     | 28.46     | 26.89     | 26.71     | 25.36     | 25.44     |

See footnotes at end of table.

**Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex | Average number of years of life remaining, $e_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>Female—Con.</b>            |  |           |           |           |           |           |           |           |           |           |           |           |
| 50.....                       | 33.37  | 31.76     | 31.42     | 30.69     | 28.77     | 27.71     | 26.40     | 24.40     | 23.05     | 22.92     | 21.67     | 21.84     |
| 55.....                       | 28.95  | 27.32     | 27.05     | 26.39     | 24.59     | 23.53     | 22.33     | 20.54     | 19.38     | 19.28     | 18.13     | 18.39     |
| 60.....                       | 24.70  | 23.10     | 22.90     | 22.29     | 20.60     | 19.52     | 18.50     | 16.92     | 15.94     | 15.87     | 14.90     | 15.21     |
| 65.....                       | 20.60  | 19.12     | 19.02     | 18.44     | 16.83     | 15.80     | 14.95     | 13.57     | 12.78     | 12.73     | 11.96     | 12.22     |
| 70.....                       | 16.68  | 15.40     | 15.38     | 14.84     | 13.35     | 12.37     | 11.71     | 10.56     | 9.99      | 9.96      | 9.38      | 9.59      |
| 75.....                       | 13.03  | 11.99     | 12.08     | 11.58     | 10.26     | 9.33      | 8.94      | 8.01      | 7.61      | 7.65      | 7.20      | 7.34      |
| 80.....                       | 9.76   | 9.05      | 9.13      | 8.69      | 7.68      | 6.72      | 6.67      | 5.99      | 5.70      | 5.75      | 5.37      | 5.51      |
| 85.....                       | 6.98   | 6.62      | 6.66      | 6.38      | 5.63      | 4.71      | 4.90      | 4.47      | 4.32      | 4.30      | 4.08      | 4.12      |
| 90.....                       | 4.77   | 4.71      | 4.73      | 4.66      | 4.14      | 3.25      | 3.54      | 3.39      | 3.24      | 3.23      | 3.05      | 3.04      |
| 95.....                       | 3.22   | 3.29      | 3.40      | 3.48      | 3.18      | 2.43      | 2.57      | 2.67      | 2.30      | 2.27      | 2.34      | 2.24      |
| 100.....                      | 2.24   | 2.29      | 2.52      | 2.81      | 2.69      | 1.91      | 1.93      | 2.17      | 1.52      | 1.48      | 1.91      | 1.61      |
| <b>White</b>                  |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 78.79  | 77.43     | 76.13     | 74.53     | 71.62     | 70.73     | 69.02     | 64.92     | 60.86     | 57.42     | 51.90     | 49.64     |
| 1.....                        | 78.17  | 76.87     | 75.72     | 74.35     | 71.91     | 71.38     | 69.95     | 66.84     | 63.46     | 60.87     | 57.46     | 55.47     |
| 5.....                        | 74.24  | 72.96     | 71.84     | 70.52     | 68.12     | 67.64     | 66.29     | 63.52     | 60.75     | 58.86     | 56.51     | 55.18     |
| 10.....                       | 69.28  | 68.01     | 66.92     | 65.62     | 63.26     | 62.79     | 61.48     | 58.83     | 56.29     | 54.65     | 52.43     | 51.34     |
| 15.....                       | 64.33  | 63.07     | 61.99     | 60.71     | 58.37     | 57.92     | 56.65     | 54.09     | 51.69     | 50.21     | 48.01     | 47.01     |
| 20.....                       | 59.47  | 58.27     | 57.23     | 55.98     | 53.66     | 53.16     | 51.91     | 49.47     | 47.28     | 46.04     | 43.77     | 43.17     |
| 25.....                       | 54.73  | 53.51     | 52.50     | 51.30     | 49.00     | 48.44     | 47.22     | 44.92     | 43.02     | 42.07     | 39.79     | 39.26     |
| 30.....                       | 50.05  | 48.72     | 47.76     | 46.59     | 44.28     | 43.69     | 42.52     | 40.40     | 38.76     | 38.17     | 35.86     | 35.51     |
| 35.....                       | 45.40  | 43.95     | 43.06     | 41.86     | 39.58     | 38.97     | 37.86     | 35.93     | 34.50     | 34.27     | 32.03     | 32.01     |
| 40.....                       | 40.77  | 39.25     | 38.41     | 37.17     | 34.95     | 34.33     | 33.29     | 31.54     | 30.33     | 30.38     | 28.29     | 28.28     |
| 45.....                       | 36.18  | 34.65     | 33.81     | 32.60     | 30.48     | 29.84     | 28.88     | 27.29     | 26.29     | 26.45     | 24.60     | 24.82     |
| 50.....                       | 31.69  | 30.17     | 29.34     | 28.21     | 26.21     | 25.57     | 24.70     | 23.26     | 22.42     | 22.64     | 21.01     | 21.18     |
| 55.....                       | 27.39  | 25.82     | 25.08     | 24.05     | 22.19     | 21.58     | 20.77     | 19.47     | 18.75     | 18.97     | 17.57     | 17.91     |
| 60.....                       | 23.30  | 21.71     | 21.08     | 20.16     | 18.48     | 17.84     | 17.15     | 15.98     | 15.37     | 15.57     | 14.43     | 14.73     |
| 65.....                       | 19.38  | 17.88     | 17.40     | 16.59     | 15.08     | 14.44     | 13.86     | 12.80     | 12.28     | 12.47     | 11.60     | 11.87     |
| 70.....                       | 15.65  | 14.34     | 14.02     | 13.35     | 12.01     | 11.37     | 10.89     | 9.96      | 9.58      | 9.72      | 9.10      | 9.31      |
| 75.....                       | 12.19  | 11.15     | 11.03     | 10.47     | 9.27      | 8.65      | 8.34      | 7.55      | 7.30      | 7.47      | 6.98      | 7.08      |
| 80.....                       | 9.11   | 8.42      | 8.39      | 7.95      | 7.01      | 6.33      | 6.27      | 5.64      | 5.45      | 5.59      | 5.22      | 5.30      |
| 85.....                       | 6.51   | 6.19      | 6.20      | 5.90      | 5.19      | 4.53      | 4.62      | 4.20      | 4.12      | 4.15      | 3.97      | 3.95      |
| 90.....                       | 4.46   | 4.44      | 4.46      | 4.36      | 3.84      | 3.20      | 3.41      | 3.16      | 3.10      | 3.17      | 3.00      | 2.93      |
| 95.....                       | 3.03   | 3.14      | 3.25      | 3.25      | 2.92      | 2.43      | 2.53      | 2.45      | 2.22      | 2.28      | 2.29      | 2.16      |
| 100.....                      | 2.13   | 2.22      | 2.43      | 2.62      | 2.41      | 1.91      | 1.92      | 1.95      | 1.48      | 1.50      | 1.71      | 1.56      |
| <b>White male</b>             |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 76.37  | 74.78     | 72.72     | 70.82     | 67.94     | 67.55     | 66.31     | 62.81     | 59.12     | 56.34     | 50.23     | 48.23     |
| 1.....                        | 75.77  | 74.25     | 72.35     | 70.70     | 68.33     | 68.34     | 67.41     | 64.98     | 62.04     | 60.24     | 56.26     | 54.61     |
| 5.....                        | 71.85  | 70.34     | 68.48     | 66.87     | 64.55     | 64.61     | 63.77     | 61.68     | 59.38     | 58.31     | 55.37     | 54.43     |
| 10.....                       | 66.89  | 65.40     | 63.55     | 61.98     | 59.69     | 59.78     | 58.98     | 57.03     | 54.96     | 54.15     | 51.32     | 50.59     |
| 15.....                       | 61.94  | 60.47     | 58.65     | 57.09     | 54.83     | 54.93     | 54.18     | 52.33     | 50.39     | 49.74     | 46.91     | 46.25     |
| 20.....                       | 57.14  | 55.72     | 53.96     | 52.45     | 50.22     | 50.25     | 49.52     | 47.76     | 46.02     | 45.60     | 42.71     | 42.19     |
| 25.....                       | 52.50  | 51.05     | 49.33     | 47.92     | 45.70     | 45.65     | 44.93     | 43.28     | 41.78     | 41.60     | 38.79     | 38.52     |
| 30.....                       | 47.92  | 46.34     | 44.71     | 43.31     | 41.07     | 40.97     | 40.29     | 38.80     | 37.54     | 37.65     | 34.87     | 34.88     |
| 35.....                       | 43.36  | 41.64     | 40.12     | 38.66     | 36.43     | 36.31     | 35.68     | 34.36     | 33.33     | 33.74     | 31.08     | 31.29     |
| 40.....                       | 38.82  | 37.01     | 35.57     | 34.04     | 31.87     | 31.73     | 31.17     | 30.03     | 29.22     | 29.86     | 27.43     | 27.74     |
| 45.....                       | 34.31  | 32.49     | 31.07     | 29.55     | 27.48     | 27.34     | 26.87     | 25.87     | 25.28     | 26.00     | 23.86     | 24.21     |
| 50.....                       | 29.91  | 28.12     | 26.71     | 25.26     | 23.34     | 23.22     | 22.83     | 21.96     | 21.51     | 22.22     | 20.39     | 20.76     |
| 55.....                       | 25.73  | 23.88     | 22.56     | 21.25     | 19.51     | 19.45     | 19.11     | 18.34     | 17.97     | 18.59     | 17.03     | 17.42     |
| 60.....                       | 21.78  | 19.90     | 18.71     | 17.56     | 16.07     | 16.01     | 15.76     | 15.05     | 14.72     | 15.25     | 13.98     | 14.35     |
| 65.....                       | 18.06  | 16.22     | 15.24     | 14.26     | 13.02     | 12.97     | 12.75     | 12.07     | 11.77     | 12.21     | 11.25     | 11.51     |
| 70.....                       | 14.51  | 12.87     | 12.11     | 11.35     | 10.38     | 10.29     | 10.07     | 9.42      | 9.20      | 9.51      | 8.83      | 9.03      |
| 75.....                       | 11.23  | 9.92      | 9.40      | 8.87      | 8.06      | 7.92      | 7.77      | 7.17      | 7.02      | 7.30      | 6.75      | 6.84      |
| 80.....                       | 8.32   | 7.43      | 7.11      | 6.76      | 6.18      | 5.89      | 5.88      | 5.38      | 5.26      | 5.47      | 5.09      | 5.10      |
| 85.....                       | 5.88   | 5.43      | 5.28      | 5.09      | 4.63      | 4.34      | 4.35      | 4.02      | 3.99      | 4.06      | 3.88      | 3.81      |
| 90.....                       | 3.98   | 3.90      | 3.85      | 3.83      | 3.49      | 3.16      | 3.27      | 3.06      | 3.03      | 3.18      | 2.99      | 2.85      |
| 95.....                       | 2.70   | 2.77      | 2.88      | 2.91      | 2.67      | 2.43      | 2.48      | 2.40      | 2.19      | 2.36      | 2.31      | 2.12      |
| 100.....                      | 1.92   | 1.98      | 2.21      | 2.41      | 2.20      | 1.91      | 1.92      | 1.96      | 1.49      | 1.58      | 1.68      | 1.55      |

See footnotes at end of table.

**Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex | Average number of years of life remaining, $e_x$ |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                               | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>White female</b>           |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 81.24  | 79.99     | 79.45     | 78.22     | 75.49     | 74.19     | 72.03     | 67.29     | 62.67     | 58.53     | 53.62     | 51.08     |
| 1.....                        | 80.59  | 79.40     | 78.99     | 77.98     | 75.66     | 74.68     | 72.77     | 68.93     | 64.93     | 61.51     | 58.69     | 56.39     |
| 5.....                        | 76.65  | 75.48     | 75.10     | 74.13     | 71.86     | 70.92     | 69.09     | 65.57     | 62.17     | 59.43     | 57.67     | 56.03     |
| 10.....                       | 71.69  | 70.53     | 70.16     | 69.21     | 66.97     | 66.05     | 64.26     | 60.85     | 57.65     | 55.17     | 53.57     | 52.15     |
| 15.....                       | 66.73  | 65.58     | 65.23     | 64.29     | 62.07     | 61.15     | 59.39     | 56.07     | 53.00     | 50.67     | 49.12     | 47.79     |
| 20.....                       | 61.82  | 60.70     | 60.36     | 59.44     | 57.24     | 56.29     | 54.56     | 51.38     | 48.52     | 46.46     | 44.88     | 43.77     |
| 25.....                       | 56.97  | 55.83     | 55.51     | 54.60     | 52.42     | 51.45     | 49.77     | 46.78     | 44.25     | 42.55     | 40.88     | 40.05     |
| 30.....                       | 52.16  | 50.95     | 50.65     | 49.76     | 47.60     | 46.63     | 45.00     | 42.21     | 39.99     | 38.72     | 36.96     | 36.42     |
| 35.....                       | 47.39  | 46.11     | 45.82     | 44.93     | 42.82     | 41.84     | 40.28     | 37.70     | 35.73     | 34.86     | 33.09     | 32.82     |
| 40.....                       | 42.66  | 41.33     | 41.03     | 40.16     | 38.12     | 37.13     | 35.64     | 33.25     | 31.52     | 30.94     | 29.26     | 29.17     |
| 45.....                       | 37.98  | 36.62     | 36.30     | 35.49     | 33.54     | 32.53     | 31.12     | 28.90     | 27.39     | 26.98     | 25.45     | 25.51     |
| 50.....                       | 33.40  | 32.01     | 31.71     | 30.96     | 29.11     | 28.08     | 26.76     | 24.72     | 23.41     | 23.12     | 21.74     | 21.89     |
| 55.....                       | 28.96  | 27.53     | 27.29     | 26.61     | 24.85     | 23.81     | 22.58     | 20.73     | 19.60     | 19.40     | 18.18     | 18.43     |
| 60.....                       | 24.69  | 23.25     | 23.09     | 22.45     | 20.79     | 19.69     | 18.64     | 17.00     | 16.05     | 15.93     | 14.92     | 15.23     |
| 65.....                       | 20.56  | 19.23     | 19.14     | 18.55     | 16.93     | 15.88     | 15.00     | 13.56     | 12.81     | 12.75     | 11.97     | 12.23     |
| 70.....                       | 16.61  | 15.47     | 15.46     | 14.89     | 13.37     | 12.38     | 11.68     | 10.50     | 9.98      | 9.94      | 9.38      | 9.59      |
| 75.....                       | 12.97  | 12.02     | 12.11     | 11.58     | 10.21     | 9.28      | 8.87      | 7.92      | 7.56      | 7.62      | 7.20      | 7.33      |
| 80.....                       | 9.69   | 9.04      | 9.12      | 8.65      | 7.59      | 6.67      | 6.59      | 5.88      | 5.63      | 5.70      | 5.35      | 5.50      |
| 85.....                       | 6.91   | 6.59      | 6.62      | 6.32      | 5.54      | 4.66      | 4.83      | 4.34      | 4.24      | 4.24      | 4.06      | 4.10      |
| 90.....                       | 4.70   | 4.67      | 4.69      | 4.59      | 4.05      | 3.23      | 3.51      | 3.24      | 3.17      | 3.16      | 3.00      | 3.02      |
| 95.....                       | 3.16   | 3.24      | 3.36      | 3.39      | 3.04      | 2.43      | 2.56      | 2.47      | 2.24      | 2.20      | 2.27      | 2.21      |
| 100.....                      | 2.18   | 2.24      | 2.49      | 2.70      | 2.49      | 1.91      | 1.92      | 1.95      | 1.48      | 1.42      | 1.74      | 1.58      |
| <b>Black<sup>1</sup></b>      |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 75.31  | 71.81     | 69.16     | 68.52     | 64.11     | 63.91     | 60.73     | 53.85     | 48.53     | 47.03     | 35.87     | 33.80     |
| 1.....                        | 75.13  | 71.84     | 69.43     | 68.99     | 65.27     | 65.75     | 62.65     | 57.15     | 51.71     | 51.01     | 43.84     | 43.00     |
| 5.....                        | 71.24  | 67.98     | 65.64     | 65.25     | 61.62     | 62.21     | 59.25     | 54.13     | 49.25     | 49.44     | 45.34     | 45.55     |
| 10.....                       | 66.30  | 63.05     | 60.75     | 60.38     | 56.79     | 57.41     | 54.50     | 49.50     | 44.80     | 45.26     | 41.74     | 42.46     |
| 15.....                       | 61.37  | 58.13     | 55.86     | 55.49     | 51.94     | 52.57     | 49.73     | 44.89     | 40.37     | 41.02     | 38.02     | 39.04     |
| 20.....                       | 56.59  | 53.38     | 51.19     | 50.75     | 47.34     | 47.88     | 45.19     | 40.73     | 36.62     | 37.72     | 34.86     | 36.03     |
| 25.....                       | 51.95  | 48.78     | 46.67     | 46.18     | 43.00     | 43.35     | 40.85     | 36.91     | 33.32     | 34.91     | 31.72     | 33.04     |
| 30.....                       | 47.35  | 44.16     | 42.22     | 41.69     | 38.70     | 38.89     | 36.59     | 33.17     | 30.07     | 31.98     | 28.43     | 29.96     |
| 35.....                       | 42.79  | 39.59     | 37.87     | 37.28     | 34.48     | 34.56     | 32.44     | 29.53     | 26.94     | 29.07     | 25.39     | 26.82     |
| 40.....                       | 38.28  | 35.12     | 33.65     | 32.98     | 30.46     | 30.39     | 28.48     | 26.06     | 23.82     | 26.07     | 22.41     | 23.73     |
| 45.....                       | 33.84  | 30.84     | 29.55     | 28.87     | 26.65     | 26.46     | 24.75     | 22.82     | 20.97     | 23.17     | 19.58     | 20.67     |
| 50.....                       | 29.53  | 26.80     | 25.62     | 25.03     | 23.11     | 22.74     | 21.38     | 19.94     | 18.22     | 20.17     | 16.84     | 17.95     |
| 55.....                       | 25.46  | 22.97     | 21.95     | 21.50     | 19.83     | 19.45     | 18.41     | 17.43     | 15.80     | 17.33     | 14.33     | 15.23     |
| 60.....                       | 21.69  | 19.43     | 18.59     | 18.29     | 16.83     | 16.53     | 15.87     | 15.18     | 13.62     | 14.72     | 12.16     | 13.06     |
| 65.....                       | 18.23  | 16.14     | 15.56     | 15.37     | 14.16     | 13.96     | 13.59     | 13.02     | 11.49     | 12.22     | 10.22     | 10.87     |
| 70.....                       | 14.99  | 13.18     | 12.87     | 12.67     | 11.77     | 11.63     | 11.48     | 10.93     | 9.54      | 9.90      | 8.59      | 8.96      |
| 75.....                       | 11.93  | 10.54     | 10.48     | 10.32     | 9.89      | 9.52      | 9.48      | 8.97      | 7.84      | 8.00      | 7.08      | 7.24      |
| 80.....                       | 9.22   | 8.29      | 8.30      | 8.17      | 8.20      | 7.28      | 7.62      | 7.31      | 6.19      | 6.22      | 5.80      | 5.79      |
| 85.....                       | 6.90   | 6.41      | 6.51      | 6.54      | 6.54      | 5.27      | 5.79      | 5.91      | 4.92      | 4.88      | 4.80      | 4.56      |
| 90.....                       | 5.07   | 4.90      | 4.94      | 5.13      | 5.09      | 3.48      | 3.97      | 4.64      | 3.83      | 3.84      | 4.26      | 3.60      |
| 95.....                       | 3.70   | 3.71      | 3.82      | 4.08      | 4.28      | 2.43      | 2.70      | 3.51      | 2.83      | 2.90      | 3.31      | 2.82      |
| 100.....                      | 2.74   | 2.81      | 2.91      | 3.58      | 3.93      | 1.91      | 1.94      | 2.57      | 1.87      | 1.94      | 2.27      | 2.18      |
| <b>Black male<sup>1</sup></b> |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                        | 71.94  | 68.17     | 64.47     | 64.10     | 60.00     | 61.48     | 58.91     | 52.26     | 47.55     | 47.14     | 34.05     | 32.54     |
| 1.....                        | 71.81  | 68.25     | 64.76     | 64.60     | 61.24     | 63.50     | 61.06     | 55.93     | 51.08     | 51.63     | 42.53     | 42.46     |
| 5.....                        | 67.92  | 64.40     | 60.98     | 60.86     | 57.60     | 59.98     | 57.69     | 52.95     | 48.69     | 50.18     | 44.25     | 45.06     |
| 10.....                       | 62.98  | 59.48     | 56.09     | 56.01     | 52.79     | 55.19     | 52.96     | 48.34     | 44.27     | 45.99     | 40.65     | 41.90     |
| 15.....                       | 58.07  | 54.57     | 51.22     | 51.14     | 47.96     | 50.39     | 48.23     | 43.74     | 39.83     | 41.75     | 36.77     | 38.26     |
| 20.....                       | 53.39  | 49.92     | 46.71     | 46.48     | 43.49     | 45.78     | 43.73     | 39.52     | 35.95     | 38.36     | 33.46     | 35.11     |
| 25.....                       | 48.90  | 45.50     | 42.40     | 42.09     | 39.45     | 41.38     | 39.49     | 35.72     | 32.67     | 35.54     | 30.44     | 32.21     |
| 30.....                       | 44.46  | 41.02     | 38.14     | 37.81     | 35.40     | 37.05     | 35.31     | 32.05     | 29.45     | 32.51     | 27.33     | 29.25     |
| 35.....                       | 40.03  | 36.56     | 34.02     | 33.60     | 31.42     | 32.81     | 31.21     | 28.48     | 26.39     | 29.54     | 24.42     | 26.16     |
| 40.....                       | 35.65  | 32.18     | 30.05     | 29.51     | 27.61     | 28.72     | 27.29     | 25.06     | 23.36     | 26.53     | 21.57     | 23.12     |
| 45.....                       | 31.32  | 28.01     | 26.18     | 25.61     | 24.03     | 24.89     | 23.59     | 21.88     | 20.59     | 23.55     | 18.85     | 20.09     |

See footnotes at end of table.

**Table 21. Life expectancy, by age, race, and sex: Death-registration states, 1900–1902 to 1919–1921, and United States, 1929–1931 to 2017—Con.**

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

| Age (years),<br>race, and sex      | Average number of years of life remaining, $e_x$ |           |           |           |           |           |           |           |           |           |           |           |
|------------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                    | 2017   | 1999–2001 | 1989–1991 | 1979–1981 | 1969–1971 | 1959–1961 | 1949–1951 | 1939–1941 | 1929–1931 | 1919–1921 | 1909–1911 | 1900–1902 |
| <b>Black male<sup>1</sup>—Con.</b> |  |           |           |           |           |           |           |           |           |           |           |           |
| 50.....                            | 27.12  | 24.13     | 22.50     | 22.03     | 20.69     | 21.28     | 20.25     | 19.06     | 17.92     | 20.47     | 16.21     | 17.34     |
| 55.....                            | 23.16  | 20.50     | 19.08     | 18.79     | 17.66     | 18.11     | 17.36     | 16.60     | 15.46     | 17.50     | 13.82     | 14.69     |
| 60.....                            | 19.57  | 17.19     | 16.01     | 15.89     | 14.93     | 15.29     | 14.91     | 14.37     | 13.15     | 14.74     | 11.67     | 12.62     |
| 65.....                            | 16.36  | 14.12     | 13.27     | 13.29     | 12.53     | 12.84     | 12.75     | 12.21     | 10.87     | 12.07     | 9.74      | 10.38     |
| 70.....                            | 13.43  | 11.40     | 10.88     | 10.94     | 10.40     | 10.81     | 10.74     | 10.11     | 8.78      | 9.58      | 8.00      | 8.33      |
| 75.....                            | 10.65  | 9.07      | 8.84      | 8.90      | 8.76      | 8.93      | 8.83      | 8.17      | 6.99      | 7.61      | 6.58      | 6.60      |
| 80.....                            | 8.19   | 7.12      | 7.01      | 7.03      | 7.35      | 6.87      | 7.07      | 6.58      | 5.42      | 5.83      | 5.53      | 5.12      |
| 85.....                            | 6.13   | 5.52      | 5.58      | 5.61      | 5.92      | 5.08      | 5.38      | 5.34      | 4.30      | 4.53      | 4.48      | 4.04      |
| 90.....                            | 4.48   | 4.23      | 4.24      | 4.47      | 4.68      | 3.42      | 3.78      | 4.23      | 3.42      | 3.60      | 4.01      | 3.21      |
| 95.....                            | 3.28   | 3.24      | 3.37      | 3.62      | 3.92      | 2.43      | 2.64      | 3.20      | 2.54      | 2.61      | 3.15      | 2.50      |
| 100.....                           | 2.45   | 2.48      | 2.63      | 3.24      | 3.61      | 1.91      | 1.93      | 2.29      | 1.68      | 1.64      | 2.14      | 1.89      |
| <b>Black female<sup>1</sup></b>    |  |           |           |           |           |           |           |           |           |           |           |           |
| 0.....                             | 78.46  | 75.16     | 73.73     | 72.88     | 68.32     | 66.47     | 62.70     | 55.56     | 49.51     | 46.92     | 37.67     | 35.04     |
| 1.....                             | 78.22  | 75.13     | 73.96     | 73.31     | 69.37     | 68.10     | 64.37     | 58.46     | 52.33     | 50.39     | 45.15     | 43.54     |
| 5.....                             | 74.33  | 71.26     | 70.16     | 69.54     | 65.70     | 64.54     | 60.93     | 55.40     | 49.81     | 48.70     | 46.42     | 46.04     |
| 10.....                            | 69.39  | 66.32     | 65.26     | 64.65     | 60.85     | 59.72     | 56.17     | 50.75     | 45.33     | 44.54     | 42.84     | 43.02     |
| 15.....                            | 64.44  | 61.39     | 60.34     | 59.74     | 55.97     | 54.85     | 51.36     | 46.13     | 40.87     | 40.36     | 39.18     | 39.79     |
| 20.....                            | 59.54  | 56.52     | 55.49     | 54.90     | 51.22     | 50.07     | 46.77     | 42.04     | 37.22     | 37.15     | 36.14     | 36.89     |
| 25.....                            | 54.72  | 51.71     | 50.72     | 50.13     | 46.57     | 45.40     | 42.35     | 38.20     | 33.93     | 34.35     | 32.97     | 33.90     |
| 30.....                            | 49.95  | 46.95     | 46.03     | 45.43     | 42.00     | 40.83     | 38.02     | 34.40     | 30.67     | 31.48     | 29.61     | 30.70     |
| 35.....                            | 45.23  | 42.26     | 41.45     | 40.79     | 37.56     | 36.41     | 33.82     | 30.83     | 27.47     | 28.58     | 26.44     | 27.52     |
| 40.....                            | 40.58  | 37.69     | 36.96     | 36.28     | 33.32     | 32.16     | 29.82     | 27.19     | 24.30     | 25.60     | 23.34     | 24.37     |
| 45.....                            | 36.04  | 33.29     | 32.58     | 31.94     | 29.31     | 28.14     | 26.07     | 23.89     | 21.39     | 22.61     | 20.43     | 21.36     |
| 50.....                            | 31.61  | 29.06     | 28.38     | 27.84     | 25.52     | 24.31     | 22.67     | 20.95     | 18.60     | 19.76     | 17.65     | 18.67     |
| 55.....                            | 27.39  | 25.01     | 24.41     | 24.00     | 21.97     | 20.89     | 19.62     | 18.38     | 16.27     | 17.09     | 14.98     | 15.88     |
| 60.....                            | 23.43  | 21.20     | 20.71     | 20.42     | 18.66     | 17.83     | 16.95     | 16.10     | 14.22     | 14.69     | 12.78     | 13.60     |
| 65.....                            | 19.69  | 17.65     | 17.37     | 17.13     | 15.67     | 15.12     | 14.54     | 13.95     | 12.24     | 12.41     | 10.82     | 11.38     |
| 70.....                            | 16.14  | 14.41     | 14.32     | 14.05     | 13.02     | 12.46     | 12.29     | 11.82     | 10.38     | 10.25     | 9.22      | 9.62      |
| 75.....                            | 12.80  | 11.49     | 11.56     | 11.37     | 10.85     | 10.10     | 10.15     | 9.81      | 8.62      | 8.37      | 7.55      | 7.90      |
| 80.....                            | 9.83   | 8.96      | 9.05      | 8.95      | 8.87      | 7.66      | 8.15      | 8.02      | 6.90      | 6.58      | 6.05      | 6.48      |
| 85.....                            | 7.29   | 6.86      | 6.99      | 7.09      | 7.00      | 5.44      | 6.15      | 6.41      | 5.48      | 5.22      | 5.09      | 5.10      |
| 90.....                            | 5.23   | 5.16      | 5.24      | 5.47      | 5.41      | 3.52      | 4.13      | 4.96      | 4.20      | 4.07      | 4.50      | 4.01      |
| 95.....                            | 3.72   | 3.84      | 3.97      | 4.30      | 4.58      | 2.43      | 2.74      | 3.71      | 3.09      | 3.18      | 3.45      | 3.15      |
| 100.....                           | 2.67   | 2.84      | 2.97      | 3.69      | 4.20      | 1.91      | 1.94      | 2.70      | 2.04      | 2.23      | 2.39      | 2.49      |

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

SOURCE: NCHS, National Vital Statistics System, Mortality.



## Technical Notes

### The life table program

Two series of complete life tables for the U.S. population are prepared by the National Center for Health Statistics (NCHS). *Decennial life tables* are based on decennial U.S. census data and final deaths for a 3-year period around the census year. *Annual final life tables* (referred to here as “annual life tables”) are based on a complete count of all reported deaths.

Available since 1945, the annual life tables are based on deaths occurring during the calendar year and on midyear postcensal population estimates provided by the U.S. Census Bureau. From 1945 to 1996, the annual life tables were abridged life tables, closed at age 85 and over, and were constructed by reference to a standard table (4). Beginning with 1997 mortality data, a new methodology similar to that of the 1989–1991 decennial life tables was employed to estimate annual complete life tables to age 100, with combined life table values presented for ages 100 and over (9). The methodology was again revised for data years 2000–2007 using a methodology similar to that of the 1999–2001 decennial life tables (10). Beginning with data year 2008, the life table methodology was refined by changing the smoothing technique used to estimate the life table functions at the oldest ages (11).

The methodology used to estimate the 2008–2017 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 2008–2017 does not model the probabilities of death beginning at age 66, as was done for data years 2000–2007, but rather at ages above 85 or so. (The exact ages at which smoothing techniques are used depends on the specific racial and ethnic population.) Research into the methodology developed and used for the 1999–2001 decennial life tables and applied to the annual life tables has revealed that it is not necessary to model (or “smooth”) the probabilities of death beginning at age 66. The observed blended vital statistics and Medicare data for ages 66–85 are robust enough and do not require additional smoothing (11). A full description of the methodology used to estimate the 2017 life tables is provided below. See “United States Life Tables, 2005” (10) for a detailed description of the methodology used for data years 2000–2007.

Beginning with 2006 mortality data, life tables by Hispanic origin were added to the annual life table program. Before this time, concerns over data limitations such as racial and ethnic misclassification on U.S. death certificates and lack of Medicare data for older populations other than the white and black populations prevented the estimation of life tables for the Hispanic-origin population. Recent research that identified and quantified these data limitations has led to the development of reliable methodological strategies to address these data problems (5,12–14). The methodology developed to estimate life tables for the Hispanic and non-Hispanic white and black populations is described in detail below and in “United States Life Tables by Hispanic Origin” (12).

### Revised intercensal life table values

Life table values for 1960–1969, 1970–1979, and 1980–1989 were constructed using the U.S. decennial life tables for 1959–1961, 1969–1971, and 1979–1981, respectively, as the standard tables. The life table values for years before 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 (<https://www.cdc.gov/nchs/products/vsus.htm>). Life table values for 1991–1999 presented in this report are based on postcensal population estimates of the population enumerated in the 1990 decennial census. Life table values for 2001–2009 presented in this report are based on revised intercensal population estimates based on the 2010 decennial census and the revised methodology used to estimate the 2008–2017 life tables. As a result, the values may differ from those previously published in annual final mortality and life table reports (15). The revised intercensal life tables for years 2001–2009 can be accessed by links provided under each of the annual life table reports in: [https://www.cdc.gov/nchs/products/life\\_tables.htm](https://www.cdc.gov/nchs/products/life_tables.htm).

### Geographic coverage

The geographic areas covered in life tables before 1929–1931 were limited to death-registration areas. Life tables for 1900–1902 and 1909–1911 were constructed using mortality data from the 1900 death-registration states (10 states and the District of Columbia), and tables for 1919–1921 used mortality data from the 1920 death-registration states (34 states and the District of Columbia). The tables for 1929–1931 through 1958 cover the coterminous United States. Decennial life table values for the 3-year period 1959–1961 were derived from data that include both Alaska and Hawaii for each year (Tables 20 and 21). Data for each year shown in Table 19 include Alaska beginning in 1959 and Hawaii beginning in 1960. However, it is believed that the inclusion of these two states does not materially affect life table values.

### New Jersey data, 1962–1964

The life tables for 1962 and 1963 for the six population groups involving race do not include data from New Jersey, which omitted the item on race from its certificates of live birth, death, and fetal death in use at the beginning of 1962. The item was restored during the latter part of 1962. However, the certificate revision without this item was used for most of 1962, as well as for 1963. For computing vital rates, populations by age, race, and sex (excluding New Jersey) were estimated to obtain comparable denominators. Approximately 7% of the New Jersey death records for 1964 did not contain the race designation. When the records were 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 were excluded from the life table statistics.

## Estimation of life table functions

For some years, it was necessary to estimate life table functions for some race–sex groups. In [Tables 20](#) and [21](#), values for the black population during the periods 1939–1941 and 1949–1951 were estimated using values for the nonwhite population. Life table functions were also missing in [Tables 20](#) and [21](#) for some race–sex groups for the periods from 1900–1902 to 1939–1941. Values were missing for the following groups:

| <i>Years</i>       | <i>Race and sex</i>                              |
|--------------------|--|
| 1900–1902. . . . . | Total white, total black                         |
| 1909–1911. . . . . | Total white, total black                         |
| 1919–1921. . . . . | Total, male, female, total white,<br>total black |
| 1929–1931. . . . . | Total, male, female, total white,<br>total black |

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

Annual life tables were initiated in 1945 for white males, white females, all other males, and all other females. The values in [Table 19](#) by race and sex for the following years were estimated using a procedure other than the abridged life table methodology (16):

| <i>Years</i>       | <i>Race and sex</i> |
|--------------------|---------------------|
| 1900–1945. . . . . | Total               |
| 1900–1947. . . . . | Male                |
| 1900–1947. . . . . | Female              |
| 1900–1950. . . . . | White               |
| 1900–1944. . . . . | White male          |
| 1900–1944. . . . . | White female        |

Annual life table functions were not calculated for the black population before 1970. In [Table 19](#), life expectancy for the black population for years before 1970 is estimated using values for the total nonwhite population.

## Data for calculating life table functions

The data used to prepare the U.S. life tables include final death counts from the National Vital Statistics System (NVSS), population estimates from the U.S. Census Bureau, and death and population counts for Medicare beneficiaries aged 66–99 from the Centers for Medicare & Medicaid Services (CMS).

## Vital statistics data

Death counts used for computing the life tables presented in this report are final numbers of deaths for 2017 collected from death certificates filed in state vital statistics offices and reported to NCHS as part of NVSS. Race and Hispanic origin are reported separately on the death certificate.

The U.S. Standard Certificate of Death was revised in 2003, and its race and Hispanic-origin items reflect the mandate of the 1997 Office of Management and Budget (OMB) standards (17). This revision allowed individuals to report more than one race and increased the race choices from four to five by separating the Asian and Pacific Islander groups. In 2017, 49 states and the District of Columbia had adopted the 1997 OMB standards, while 1 state continued to collect race and ethnicity data according to the 1977 OMB standards (6,18). To attain uniformity and comparability during the transition period until all states implement the 1997 standards, multiple-race responses are “bridged” back to the 1977 single-race standard, and Asian and Pacific Islander groups are combined according to the 1977 standards. The bridging procedure is the same as that used to bridge multiple-race population estimates, as discussed below (19).

## Census population data

The population data used to estimate the life tables shown in this report were produced under a collaborative agreement with the U.S. Census Bureau and are consistent with the postcensal estimates of the 2010 census. Reflecting the 1997 OMB guidelines on race and ethnicity reporting (17), the 2010 census included an option for individuals to report more than one race and provided for the reporting of Asian persons separately from Native Hawaiian or other Pacific Islander 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 2017, 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 (i.e., 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) (20). The procedures used to produce the bridged populations are described elsewhere (19).

## Medicare data

Medicare data have traditionally been employed in the estimation of U.S. decennial life tables and in the estimation of U.S. annual life tables since 1997 (9). Medicare data are considered to be more accurate than vital statistics and census data at the oldest ages because Medicare enrollees must have proof of age in order to enroll (21). However, the reliability of Medicare data beyond age 100 declines because of the small percentage of persons who enrolled at the start of the Medicare program in 1965 and for whom it was not possible to verify exact

age (21). Further, the Medicare race and ethnicity classification system makes it impossible to correctly identify the Hispanic, American Indian or Alaska Native, or Asian or Pacific Islander populations (12,22). It is, however, possible to use Medicare data to estimate old-age mortality for both the white and black race groups, irrespective of Hispanic origin, as has been done traditionally, and to estimate old-age mortality for the non-Hispanic segments of these populations (12). As a result, data from the Medicare program are used to supplement vital statistics and census data for ages 66–99 for the total population and for the white, black, non-Hispanic white, and non-Hispanic black populations (12).

To estimate death rates for the Medicare white, black, non-Hispanic white, and non-Hispanic black populations in 2017, age-specific numbers of deaths and population counts by sex and race for the population aged 66–99 from the 2018 Medicare file were used. The data file is created by CMS for the Social Security Administration, which under a special agreement shares the data with NCHS. The 2018 file contains 2017 mid-year Medicare population counts (June 30, 2017) and calendar year Medicare death counts (January 1 through December 31, 2017). Age for both deaths and mid-year population counts is calculated as age at last birthday. The structure of this file differs from the previous Medicare files used to produce the life tables in several important ways. First, CMS now generates the summary data from the Integrated Data Repository (IDR) rather than the Health Insurance Skeleton Writeoff (HISKEW) file. IDR is considered superior to HISKEW with respect to data quality because it contains more ways to correctly determine beneficiary status. Second, deaths are tabulated by age at last birthday as has been done for population counts. Previously, deaths were tabulated by calendar age, which required additional steps to align age at death with age for the living population. Third, counts for the living population are generated as of June 30, rather than as of January 1, making the calculation of the age-specific death rates more direct. With the previous data structure, it was necessary to average January 1 population counts across 2 years and smooth half ages to achieve whole age counts. Last, final summary counts for a calendar year are available 6 months after the close of the data year. Previously, final counts became available 3 years after the close of the data year, which resulted in the estimation of provisional and final life tables for a data year. With the new Medicare data file structure, only one final version of the U.S. life tables will be produced for each data year. The life expectancy estimates are not substantively affected as a result of the change in the structure of the Medicare data files.

## Preliminary adjustment of the data

### Adjustment for unknown age

An adjustment is made to account for the small proportion of deaths each year for which age is not reported on the death certificate. The number of deaths in each age category is adjusted proportionally to account for those with not-stated ages. The following factor ( $F$ ) is used to make the adjustment.

$F$  is calculated for the total and for each sex group within a racial and ethnic population for which life tables are constructed:

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

where  $D$  is the total number of deaths and  $D_a$  is the total number of deaths for which age is stated.  $F$  is then applied by multiplying it by the number of deaths in each age group. Table I shows values for  $F$  by sex used to adjust mortality data for the total, white, black, Hispanic, non-Hispanic white, and non-Hispanic black populations in 2017.

**Table I. Values for  $F$  used to adjust for not-stated age based on 2017 mortality data**

| Race, Hispanic origin, and sex | Total deaths | Total deaths for which age was not stated | $F$        |
|--------------------------------|--------------|---|------------|
| Total . . . . .                | 2,813,503    | 129                                       | 1.00004585 |
| Male . . . . .                 | 1,439,111    | 91  | 1.00006324 |
| Female . . . . .               | 1,374,392    | 38  | 1.00002765 |
| White . . . . .                | 2,378,385    | 108                                       | 1.00004541 |
| Male . . . . .                 | 1,212,488    | 77  | 1.00006351 |
| Female . . . . .               | 1,165,897    | 31  | 1.00002659 |
| Black . . . . .                | 340,644      | 21  | 1.00006165 |
| Male . . . . .                 | 177,332      | 14  | 1.00007895 |
| Female . . . . .               | 163,312      | 7   | 1.00004286 |
| Hispanic . . . . .             | 197,249      | 11  | 1.00005577 |
| Male . . . . .                 | 108,579      | 8   | 1.00007368 |
| Female . . . . .               | 88,670       | 3   | 1.00003383 |
| Non-Hispanic white . . . . .   | 2,179,857    | 60  | 1.00002753 |
| Male . . . . .                 | 1,102,838    | 47  | 1.00004262 |
| Female . . . . .               | 1,077,019    | 13  | 1.00001207 |
| Non-Hispanic black . . . . .   | 335,667      | 16  | 1.00004767 |
| Male . . . . .                 | 174,403      | 10  | 1.00005734 |
| Female . . . . .               | 161,264      | 6   | 1.00003721 |

SOURCE: NCHS, National Vital Statistics System, Mortality.

### Adjustment for misclassification of race and Hispanic origin on death certificates

The latest research to evaluate race and Hispanic-origin reporting on U.S. death certificates found that the misclassification of race and Hispanic origin on death certificates in the United States accounts for a net underestimate of 3% for total Hispanic deaths, a net underestimate of less than one-half percent for total non-Hispanic black deaths, and no under or overestimate for total non-Hispanic white deaths or for the population racially classified as white or black, irrespective of Hispanic origin (5). These results are based on a comparison of self-reported race and Hispanic origin on Current Population Surveys (CPS) with race and Hispanic origin reported on the death certificates of a sample of decedents in the National Longitudinal Mortality Study (NLMS) who died during the period 1999–2011 (5).

NLMS-linked records are used to estimate sex-age-specific ratios of CPS race and Hispanic-origin counts to death certificate counts (5,13,14). The CPS/death certificate ratio, or “classification ratio,” is 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 (5,13,14). The assumption is made that the race and ethnicity reported by a CPS respondent is more reliable than proxy reporting of race and ethnicity by a funeral director who has little personal knowledge of the decedent. Further, public policy embodied in the 1997 OMB standard mandates that self-identification should be the standard used for the collection and recording of race and ethnicity information (17).

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

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

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

Because NLMS classification ratios for infant deaths are unreliable due to small sample sizes, corrections for racial and ethnic misclassification of infant deaths are addressed by using

infant death counts and live birth counts from the 2016 and 2017 linked birth/infant death data files rather than the traditional birth and death data files (23,24). In the linked file, each infant death record is linked to its corresponding birth record so that the race and ethnicity reported on the birth record can be ascribed to the infant death record. As a result, race- and ethnicity-specific infant mortality rates estimated with the linked file do not suffer from the problem of racial and ethnic discrepancies between the numerator and denominator of the rate. A ratio of infant mortality rates based on the traditional birth and death data files to infant mortality rates based on the linked birth/infant death data file shows that using the traditional files overestimates the infant mortality rate by 4.9% for Hispanic infants and 5.3% for non-Hispanic black infants, and underestimates the rate by 2% for non-Hispanic white infants (see ratios for age 0 in Table II). Because the probability of death at age 0 used to calculate the life table uses live births in the denominator (procedure described below), it is preferable to use the linked birth/infant death data file.

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

### Interpolation of $P_x$ and $D_x$

Anomalies—both random and those associated with reporting age at death—can be problematic when using vital statistics and census data by single years of age to estimate the probability of death (1,9). 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  ${}_nP_x$  from age 0 to 99 and  ${}_nD_x$  from age 5 to 99, and where  ${}_nD_x$  has first

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

| Age (years)              | Hispanic |        |         | Non-Hispanic white |        |        | Non-Hispanic black |        |         |
|--------------------------|----------|--------|---------|--------------------|--------|--------|--------------------|--------|---------|
|                          | Total    | Male   | Female  | Total              | Male   | Female | Total              | Male   | Female  |
| All ages . . . . .       | 1.0329   | 1.0362 | 1.0294  | 0.9995             | 0.9993 | 0.9997 | 1.0047             | 1.0041 | 1.0053  |
| 0 <sup>1</sup> . . . . . | 1.0489   | 1.0655 | 1.0299  | 0.9831             | 0.9774 | 0.9905 | 1.0532             | 1.0612 | 1.0432  |
| 1–14. . . . .            | 0.9905   | 0.9659 | *1.0299 | 0.9918             | 1.0755 | 0.8770 | 1.0266             | 0.9379 | *1.1751 |
| 15–24. . . . .           | 0.9668   | 0.9325 | 1.0604  | 0.9976             | 1.0019 | 0.9869 | 1.0248             | 1.0215 | 1.0343  |
| 25–34. . . . .           | 1.0354   | 1.0401 | 1.0232  | 1.0021             | 1.0034 | 0.9994 | 0.9855             | 0.9770 | 1.0008  |
| 35–44. . . . .           | 1.0434   | 1.0645 | 1.0066  | 0.9980             | 0.9997 | 0.9951 | 1.0062             | 1.0073 | 1.0048  |
| 45–54. . . . .           | 1.0584   | 1.0372 | 1.0953  | 0.9969             | 0.9965 | 0.9976 | 1.0002             | 1.0019 | 0.9982  |
| 55–64. . . . .           | 1.0571   | 1.0517 | 1.0659  | 0.9994             | 0.9992 | 0.9997 | 1.0003             | 0.9965 | 1.0046  |
| 65–74. . . . .           | 1.0295   | 1.0485 | 1.0072  | 0.9967             | 0.9967 | 0.9966 | 1.0062             | 1.0055 | 1.0070  |
| 75–84. . . . .           | 1.0192   | 1.0188 | 1.0196  | 1.0004             | 1.0003 | 1.0004 | 1.0057             | 1.0057 | 1.0058  |
| 85–94. . . . .           | 1.0208   | 1.0313 | 1.0137  | 1.0008             | 1.0007 | 1.0009 | 1.0110             | 1.0155 | 1.0086  |
| 95 and over . . .        | 1.0732   | 1.0509 | 1.0842  | 1.0005             | 0.9995 | 1.0008 | 0.9980             | 0.9872 | 0.9954  |

\*Ratio does not meet NCHS standards of reliability 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.

<sup>1</sup>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 2017 linked birth/infant death data file. Ratios are shown for illustrative purposes only; see text for details.

been adjusted for not-reported age and race and Hispanic-origin misclassification on the death certificate (see [reference 9](#) 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,  $m_x$  (3,26). 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:

$$q_x = \frac{m_x}{1 + (1 - a_x) m_x} \quad [3]$$

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,

$$q_x = \frac{m_x}{1 + \frac{1}{2} m_x} \quad [4]$$

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

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

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

$$q_x = \frac{M_x}{1 + \frac{1}{2} M_x} = \frac{D_x}{P_x + \frac{1}{2} D_x} \quad [5]$$

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 2017,  $B^t$  is the number of live births in 2017, and  $B^{t-1}$  is the number of live births in 2016. [Table III](#) shows separation factors and numbers of births for 2016–2017.

## 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:

$$M_x = \frac{1}{30} [(95-x) M_x^V + (x-65) M_x^M] \quad [7]$$

when  $x = 66, \dots, 94$

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

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

$M_x^M$  is estimated as follows:

$$M_x^M = \frac{D_x^M}{P_x^M}$$

where  $D_x^M$  is the age-specific Medicare death count, and  $P_x^M$  is the age-specific Medicare mid-year population count.

A logistic model proposed by Kannisto is then used to smooth  $M_x$  in the age range 85–99 and predict  $M_x$  in the age range 100–120 (27). The start of the modeled age range varies by race- and ethnicity-specific population because it is a function of the age at which the rate of change in the age-specific death rates 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 (28). Further, the observed data for the age range 65–85 or so is reliable and robust, as indicated by the very close similarity between vital statistics and Medicare death rates, so it is unnecessary to model (smooth) the entire age span (65–100).

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

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

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

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

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

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

Then, the estimated parameters are used to predict as  $\bar{M}_x$  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  $\beta$ , respectively, given by fitting model [9]. Estimated parameters and the starting age for the modeled age span by population in 2017 are presented in Table IV.

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

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

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

## Probabilities of dying at the oldest ages for the Hispanic population

As noted above, Medicare data are unreliable for the Hispanic population due to inconsistencies in the Medicare race and ethnicity classification system. As a result, it was necessary

to use other methods to estimate mortality at the oldest ages for this population. Beyond age 80, mortality estimates based strictly on vital statistics for the Hispanic population are too low, despite correction for ethnic misclassification on the death certificate.

A consistent finding across diverse studies has been that Hispanic mortality in the adult and advanced ages varies between approximately 80% and 89% of that of the non-Hispanic white population (13,14,25,29). The Brass relational logit model takes advantage of the relationship between Hispanic and non-Hispanic white mortality previously identified and has been widely and successfully used to predict the mortality of one population relative to another at the older ages (3,30–32). Using the age-specific mortality pattern of the non-Hispanic white population as the “standard,” the Brass relational logit model is used to predict Hispanic mortality in the older ages. The standard is fit to Hispanic data in the age interval 45–80, and the predicted parameters are used to estimate the probabilities of death for ages 76–100. This method allows the relationship between the two populations in the younger ages to be carried over to the older ages (3,30–32).

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

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

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

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

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

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

$\alpha$  is the predicted parameter that measures the level of mortality of the population of interest relative to the standard population, and  $\beta$  is the predicted parameter that measures the slope of the mortality function of the population of interest relative to the standard population (3,30–32). Table V shows values of predicted  $\alpha$  and  $\beta$  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  $\alpha$  and  $\beta$  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 III. Births in 2016 and 2017, deaths in 2017 of infants born in 2016 and 2017, and separation factors, by race, Hispanic origin, and sex: United States**

| Births, deaths, and separation factors | Total      |           |           | White      |           |           | Black      |         |         | Hispanic   |         |         | Non-Hispanic white |           |           | Non-Hispanic black |         |         |
|--|------------|-----------|-----------|------------|-----------|-----------|------------|---------|---------|------------|---------|---------|--------------------|-----------|-----------|--------------------|---------|---------|
|  | Both sexes | Male      | Female    | Both sexes | Male      | Female    | Both sexes | Male    | Female  | Both sexes | Male    | Female  | Both sexes         | Male      | Female    | Both sexes         | Male    | Female  |
| Births:                                |            |           |           |            |           |           |            |         |         |            |         |         |                    |           |           |                    |         |         |
| 2016 . . . . .                         | 3,945,875  | 2,018,183 | 1,927,692 | 2,945,970  | 1,508,585 | 1,437,385 | 654,067    | 331,470 | 322,597 | 918,447    | 468,504 | 449,943 | 2,094,054          | 1,073,824 | 1,020,230 | 583,786            | 295,719 | 288,067 |
| 2017 . . . . .                         | 3,855,500  | 1,972,885 | 1,882,615 | 2,857,845  | 1,463,322 | 1,394,523 | 658,115    | 334,660 | 323,455 | 898,764    | 457,788 | 440,976 | 2,030,493          | 1,041,692 | 988,801   | 587,357            | 298,690 | 288,667 |
| Deaths in 2017 of infants born in:     |            |           |           |            |           |           |            |         |         |            |         |         |                    |           |           |                    |         |         |
| 2016 . . . . .                         | 2,747      | 1,559     | 1,194     | 1,636      | 929       | 704       | 944        | 540     | 404     | 523        | 292     | 232     | 1,171              | 670       | 502       | 850                | 482     | 367     |
| 2017 . . . . .                         | 19,588     | 10,910    | 8,673     | 12,231     | 6,815     | 5,419     | 6,155      | 3,431   | 2,724   | 4,061      | 2,181   | 1,878   | 8,349              | 4,733     | 3,615     | 5,540              | 3,061   | 2,480   |
| Separation factor, <i>f</i> . . .      | 0.123      | 0.125     | 0.121     | 0.118      | 0.120     | 0.115     | 0.133      | 0.136   | 0.129   | 0.114      | 0.118   | 0.110   | 0.123              | 0.124     | 0.122     | 0.133              | 0.136   | 0.129   |

SOURCE: NCHS, National Vital Statistics System, Mortality.

**Table IV. Estimated parameters  $\alpha$  and  $\beta$  used for predicting  $m_x$  and starting age of modeled age span: United States Life Tables, 2017**

| Parameter               | Total      |           |           | White      |           |           | Black      |           |           | Non-Hispanic white |           |           | Non-Hispanic black |           |           |
|-------------------------|------------|-----------|-----------|------------|-----------|-----------|------------|-----------|-----------|--------------------|-----------|-----------|--------------------|-----------|-----------|
|                         | Both sexes | Male      | Female    | Both sexes | Male      | Female    | Both sexes | Male      | Female    | Both sexes         | Male      | Female    | Both sexes         | Male      | Female    |
| Starting age . . . . .  | 86         | 86        | 86        | 86         | 86        | 86        | 85         | 85        | 86        | 86                 | 86        | 86        | 86                 | 85        | 86        |
| $\ln(\alpha)$ . . . . . | -13.79458  | -13.82759 | -14.40998 | -14.03133  | -14.17221 | -14.63431 | -11.23142  | -11.05145 | -12.41953 | -13.98149          | -14.11582 | -14.58890 | -11.51252          | -10.93766 | -12.33784 |
| (SE) . . . . .          | (0.140)    | (0.138)   | (0.151)   | (0.122)    | (0.189)   | (0.113)   | (0.298)    | (0.238)   | (0.172)   | (0.120)            | (0.186)   | (0.111)   | (0.178)            | (0.232)   | (0.168)   |
| $\beta$ . . . . .       | 0.1342198  | 0.1366751 | 0.1398584 | 0.1370951  | 0.1407714 | 0.1425772 | 0.1046864  | 0.1049647 | 0.1168216 | 0.136582           | 0.1401916 | 0.1421095 | 0.1078629          | 0.103776  | 0.1159727 |
| (SE) . . . . .          | (0.002)    | (0.002)   | (0.002)   | (0.001)    | (0.002)   | (0.001)   | (0.003)    | (0.003)   | (0.002)   | (0.001)            | (0.002)   | (0.001)   | (0.002)            | (0.003)   | (0.002)   |

NOTE: SE is standard error.

SOURCE: NCHS, National Vital Statistics System, Mortality.

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

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

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

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

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

**Table V. Estimated Brass relational logit model parameters  $\alpha$  and  $\beta$  for the Hispanic-origin population, 2017**

| Parameter          | Total (SE)         | Male (SE)          | Female (SE)        |
|--------------------|--------------------|--------------------|--------------------|
| $\alpha$ . . . . . | -0.2610415 (0.022) | -0.2163732 (0.030) | -0.2109235 (0.024) |
| $\beta$ . . . . .  | 1.00950 (0.006)    | 1.0093710 (0.008)  | 1.031907 (0.007)   |

NOTE: SE is standard error.

SOURCE: NCHS, National Vital Statistics System, Mortality.

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

### Calculation of remaining life table functions for all groups

#### Survivor function ( $l_x$ )

The life table radix,  $l_0$ , is set at 100,000. For ages greater than 0, the number of survivors remaining at exact age  $x$  is calculated as

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

#### Decrement function ( $d_x$ )

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

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

Note that  ${}_∞d_{100} = {}_∞l_{100}$  because  ${}_∞q_{100} = 1.0$

#### Person-years lived ( $L_x$ )

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

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

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

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

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

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

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

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

### Life expectancy at age $x$ ( $e_x$ )

Life expectancy at exact age  $x$  is calculated as

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

### Abriding 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. 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  $x$  (i.e., the beginning of the age interval  $x$  to  $x + n$  [where  $n$  denotes the length of the age interval; for 5-year age intervals,  $n = 5$ ]). Life expectancy at age 20 ( $e_{20}$ ), for example, has the same value regardless of whether the age interval is 20–21 or 20–25. Thus, the values  $l_x$ ,  $T_x$ , and  $e_x$  can be extracted at 5-year intervals from the complete life table and placed into the abridged life table (compare  $l_x$ ,  $T_x$ , and  $e_x$  in Table VI with the same functions in Table 1). It is also illustrative to compare values for  $e_x$  and  $l_x$  in Tables A and B with their corresponding values presented in Tables 1–18. The  $q_x$ ,  $d_x$ , and  $L_x$  functions, in contrast, describe the age interval  $x$  to  $x + n$ . In fact, for abridged life tables, the notation for these functions is different ( ${}_nq_x$ ,  ${}_nd_x$ , and  ${}_nL_x$ , respectively). Thus,  ${}_5q_{20}$  is the probability of dying between ages 20 and 25 and will obviously be somewhat larger than  $q_{20}$ , the probability of dying between ages 20 and 21. Taking this into account,  ${}_nq_x$ ,  ${}_nd_x$ , and  ${}_nL_x$  must be recalculated in the abridged life table. It is simplest to begin with  ${}_nd_x$ . The calculations are made for all but the final age interval as follows:

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

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

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

Note that for the open-ended interval, ages 100 and over:  ${}_∞d_{100} = l_{100}$ ,  ${}_∞q_{100} = 1.0$ , and  ${}_∞L_{100} = T_{100}$ . Table VI shows each of the life table functions for the 2017 U.S. total population abridged from Table 1.



**Table VI. Life table for the total population: United States, 2017**

| Age (years)       | Probability of dying<br>between ages<br>$x$ and $x + n$ | Number<br>surviving to<br>age $x$ | Number dying<br>between ages<br>$x$ and $x + n$ | Person-years lived<br>between ages<br>$x$ and $x + n$ | Total number of<br>person-years lived<br>above age $x$ | Expectation<br>of life<br>at age $x$ |
|-------------------|---|-----------------------------------|---|---|--|--------------------------------------|
|                   | ${}_nq_x$   | $l_x$                             | ${}_nd_x$                                       | ${}_nL_x$   | $T_x$  | $e_x$                                |
| 0-1.....          | 0.005777  | 100,000                           | 578   | 99,493  | 7,860,752  | 78.6                                 |
| 1-5.....          | 0.000971  | 99,422                            | 97  | 397,459   | 7,761,259  | 78.1                                 |
| 5-10.....         | 0.000580  | 99,326                            | 58  | 496,474   | 7,363,800  | 74.1                                 |
| 10-15.....        | 0.000772  | 99,268                            | 77  | 496,190   | 6,867,327  | 69.2                                 |
| 15-20.....        | 0.002567  | 99,191                            | 255   | 495,410   | 6,371,137  | 64.2                                 |
| 20-25.....        | 0.004758  | 98,937                            | 471   | 493,577   | 5,875,727  | 59.4                                 |
| 25-30.....        | 0.006032  | 98,466                            | 594   | 490,888   | 5,382,151  | 54.7                                 |
| 30-35.....        | 0.007248  | 97,872                            | 709   | 487,635   | 4,891,263  | 50.0                                 |
| 35-40.....        | 0.008660  | 97,163                            | 841   | 483,766   | 4,403,628  | 45.3                                 |
| 40-45.....        | 0.010860  | 96,321                            | 1,046   | 479,115   | 3,919,862  | 40.7                                 |
| 45-50.....        | 0.015514  | 95,275                            | 1,478   | 472,916   | 3,440,747  | 36.1                                 |
| 50-55.....        | 0.024080  | 93,797                            | 2,259   | 463,725   | 2,967,831  | 31.6                                 |
| 55-60.....        | 0.036188  | 91,538                            | 3,313   | 449,853   | 2,504,106  | 27.4                                 |
| 60-65.....        | 0.051344  | 88,226                            | 4,530   | 430,324   | 2,054,253  | 23.3                                 |
| 65-70.....        | 0.071680  | 83,696                            | 5,999   | 404,199   | 1,623,929  | 19.4                                 |
| 70-75.....        | 0.106548  | 77,697                            | 8,278   | 368,898   | 1,219,730  | 15.7                                 |
| 75-80.....        | 0.166810  | 69,418                            | 11,580  | 319,671   | 850,832  | 12.3                                 |
| 80-85.....        | 0.267232  | 57,839                            | 15,456  | 252,094   | 531,161  | 9.2                                  |
| 85-90.....        | 0.420519  | 42,382                            | 17,823  | 167,663   | 279,068  | 6.6                                  |
| 90-95.....        | 0.618853  | 24,560                            | 15,199  | 82,334  | 111,405  | 4.5                                  |
| 95-100.....       | 0.797697  | 9,361                             | 7,467   | 24,922  | 29,071   | 3.1                                  |
| 100 and over..... | 1.000000  | 1,894                             | 1,894   | 4,148   | 4,148  | 2.2                                  |

SOURCE: NCHS, National Vital Statistics System, Mortality.

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