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Deaths: Final Data for 2015

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Abstract

Objectives—This report presents final 2015 data on U.S. deaths, death rates, life expectancy, infant mortality, and trends, by selected characteristics such as age, sex, Hispanic origin and race, state of residence, and cause of death.

Methods—Information reported on death certificates, which are completed by funeral directors, attending physicians, medical examiners, and coroners, is presented in descriptive tabulations. The original records are filed in state registration offices. Statistical information is compiled in a national database through the Vital Statistics Cooperative Program of the National Center for Health Statistics. Causes of death are processed in accordance with the *International Classification of Diseases, Tenth Revision*.

Results—In 2015, a total of 2,712,630 deaths were reported in the United States. The age-adjusted death rate was 733.1 deaths per 100,000 U.S. standard population, an increase of 1.2% from the 2014 rate. Life expectancy at birth was 78.8 years, a decrease of 0.1 year from 2014. Life expectancy decreased from 2014 to 2015 for non-Hispanic white males (0.2 year), non-Hispanic white females (0.1), non-Hispanic black males (0.4), non-Hispanic black females (0.1), Hispanic males (0.1), and Hispanic females (0.2). Age-specific death rates increased in 2015 from 2014 for age groups 5–14, 15–24, 25–34, 35–44, 55–64, 65–74, and 85 and over. The 15 leading causes of death in 2015 remained the same as in 2014. The infant mortality rate, 5.90 infant deaths per 1,000 live births in 2015, did not change significantly from the rate of 5.82 in 2014.

Conclusions—The age-adjusted death rate increased for the first time since 2005. Life expectancy for the total population decreased for the first time since 1993.

Keywords: mortality • cause of death • life expectancy • vital statistics

Highlights

Mortality experience in 2015

- In 2015, a total of 2,712,630 resident deaths were registered in the United States, yielding a crude death rate of 844.0 per 100,000 population.
- The age-adjusted death rate, which accounts for the aging of the population, was 733.1 deaths per 100,000 U.S. standard population.
- Life expectancy at birth was 78.8 years.
- The 15 leading causes of death in 2015 were:
    1. Diseases of heart (heart disease)
    2. Malignant neoplasms (cancer)
    3. Chronic lower respiratory diseases
    4. Accidents (unintentional injuries)
    5. Cerebrovascular diseases (stroke)
    6. Alzheimer's disease
    7. Diabetes mellitus (diabetes)
    8. Influenza and pneumonia
    9. Nephritis, nephrotic syndrome and nephrosis (kidney disease)
    10. Intentional self-harm (suicide)
    11. Septicemia
    12. Chronic liver disease and cirrhosis
    13. Essential hypertension and hypertensive renal disease (hypertension)
    14. Parkinson's disease
    15. Pneumonitis due to solids and liquids
- In 2015, the infant mortality rate was 5.90 infant deaths per 1,000 live births.
- The 10 leading causes of infant death were:
    1. Congenital malformations, deformations and chromosomal abnormalities (congenital malformations)

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2. Disorders related to short gestation and low birth weight, not elsewhere classified (low birth weight)
3. Sudden infant death syndrome (SIDS)
4. Newborn affected by maternal complications of pregnancy (maternal complications)
5. Accidents (unintentional injuries)
6. Newborn affected by complications of placenta, cord and membranes (cord and placental complications)
7. Bacterial sepsis of newborn
8. Respiratory distress of newborn
9. Diseases of the circulatory system
10. Neonatal hemorrhage

Trends

- The age-adjusted death rate increased 1.2% in 2015 after reaching a record low in 2014.
- Differences in mortality persisted between the non-Hispanic black and non-Hispanic white populations. The age-adjusted death rate has been 1.2 times greater for the non-Hispanic black population than for the non-Hispanic white population since 2008.
- The age-adjusted death rate for the non-Hispanic white population was 1.4 times greater than for the Hispanic population. This difference has remained unchanged since 2010.
- Life expectancy for the total population decreased 0.1 year from 78.9 in 2014.
- Life expectancy for females was 4.9 years higher than for males. The difference in life expectancy between the sexes has narrowed since 1979, when it was 7.8 years, but it increased 0.1 year in 2015 from 2014, the first increase since 1990.
- In 2015 compared with 2014, life expectancy decreased for non-Hispanic white males (0.2 year), non-Hispanic white females (0.1), non-Hispanic black males (0.4), non-Hispanic black females (0.1), Hispanic males (0.1), and Hispanic females (0.2).
- The difference in life expectancy between the Hispanic and non-Hispanic white populations was 3.3 years in 2015, unchanged from 2014.
- The 15 leading causes of death in 2015 were the same as in 2014.
- The age-adjusted rate for one leading cause—cancer—continued its long-term decreasing trend in 2015. However, significant increases occurred in 2015 from 2014 for 13 of the 15 leading causes of death, including heart disease, Chronic lower respiratory diseases, unintentional injuries, stroke, Alzheimer's disease, diabetes, kidney disease, suicide, Septicemia, Chronic liver disease and cirrhosis, hypertension, Parkinson's disease, and Pneumonitis due to solids and liquids.
- Age-adjusted death rates increased in 2015 from 2014 for drug-induced causes (11.0%), alcohol-induced causes (7.1%), and firearm-related injuries (7.8%).
- The decrease in life expectancy at birth for the total population in 2015 was mainly due to increases in mortality from unintentional injuries, Alzheimer's disease, homicide, Chronic lower respiratory diseases, and suicide.
- The difference in life expectancy between the non-Hispanic white and non-Hispanic black populations increased by 0.1 year, from 3.5 years in 2014 to 3.6 years in 2015.
- Among external causes of injury death, unintentional poisoning has been the leading mechanism of injury mortality since 2011, followed by unintentional motor vehicle traffic-related injuries.
- The difference in the infant mortality rate of 5.90 infant deaths per 1,000 live births in 2015 from the record low of 5.82 in 2014 was not statistically significant.
- The top 10 leading causes of infant death in 2015 remained the same as in 2014.

Introduction

This report presents detailed 2015 data on deaths and death rates according to a number of demographic and medical characteristics. These data provide information on mortality patterns among residents of the United States by such variables as age, sex, Hispanic origin and race, state of residence, and cause of death. Information on these mortality patterns is key to understanding changes in the health and well-being of the U.S. population (1). Companion reports present additional details on leading causes of death and life expectancy in the United States (2,3).

Mortality data in this report can be used to monitor and evaluate the health status of the United States in terms of current mortality levels and long-term mortality trends, as well as to identify segments of the U.S. population at greater risk of death from specific diseases and injuries. Differences in death rates among various demographic subpopulations, including race and ethnicity groups, may reflect subpopulation differences in factors such as socioeconomic status, access to medical care, and the prevalence of specific risk factors in a particular subpopulation.

Methods

This report has been redesigned from previous years. Tables previously showing race and Hispanic origin separately have been combined. Tables previously showing 113 selected causes of death or 130 selected causes of infant death now show only select causes. These causes were selected primarily because of their impact on public health and future planning. Injury mortality by mechanism and intent is shown only for the total and top four major mechanisms of injury death. Detailed data no longer shown in this report are still available as supplemental tables (see List of Internet Tables). In addition to the Internet tables, data for all causes in the "List of 113 Selected Causes of Death" and "List of 130 Selected Causes of Infant Death" are also available from CDC's WONDER system (4), and data on injury mortality by mechanism and intent are also available in a data visualization format from the NCHS Data Visualization Gallery at https://www.cdc.gov/nchs/data-visualization/index.htm, as well as from CDC's WONDER system (4). The Technical Notes section

no longer includes information about supplemental tables not shown in the report; this information is instead provided as a separate Supplemental Technical Notes in electronic format to accompany the supplemental Internet tables.

Data in this report are based on information from all resident death certificates filed in the 50 states and the District of Columbia. More than 99% of deaths occurring in this country are believed to be registered (5). Tables showing data by state also provide information for Puerto Rico, Guam, Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands (Northern Marianas). Cause-of-death statistics presented in this report are classified in accordance with the *International Classification of Diseases*, *Tenth Revision* (ICD–10) (6–8). A discussion of the cause-of-death classification is provided in Technical Notes at the end of the report.

Mortality data on specific demographic and medical characteristics cover all 50 states and the District of Columbia. Measures of mortality in this report include the number of deaths; crude, age-specific, and age-adjusted death rates; infant, neonatal, and postneonatal mortality rates; life expectancy; and rate ratios. Changes in death rates in 2015 compared with 2014, and differences in death rates across demographic groups in 2015, are tested for statistical significance. Unless otherwise specified, reported differences are statistically significant. Additional information on these statistical methods, random variation and relative standard error, the computation of derived statistics and rates, population denominators, and the definition of terms is presented in Technical Notes.

The populations used to calculate death rates shown in this report for 1991–2015 were produced under a collaborative arrangement with the U.S. Census Bureau. Populations for 2010–2015 and the intercensal period 2001–2009 are consistent with the 2010 census (9–15). Reflecting the latest guidelines issued in 1997 by the Office of Management and Budget (OMB), the 2000 and 2010 censuses included an option for persons to report more than one race as appropriate for themselves and household members (16); see Technical Notes for details on the 2015 multiple-race reporting area and methods used to bridge responses for those who report more than one race. Beginning with deaths occurring in 2003, some states allowed for multiple-race reporting on the death certificate. Multiple-race data for these states are bridged to single-race categories; see Technical Notes. Once all states are collecting data on race according to 1997 OMB guidelines, use of the bridged-race process is expected to be discontinued.

The population data used to compute death rates by race and Hispanic origin in this report are based on special estimation procedures and are not true counts (see Technical Notes, "Race and Hispanic origin"). This is the case even for the 2000 and 2010 populations. The estimation procedures used to develop these populations contain some error. Smaller population groups are affected much more than larger population groups (17). Data presented in this report and other mortality tabulations are available from the National Center for Health Statistics (NCHS), National Vital Statistics System website: https://www.cdc.gov/nchs/deaths.htm. Availability of mortality microdata is described in Technical Notes.

Results and Discussion

Deaths and death rates

In 2015, a total of 2,712,630 resident deaths were registered in the United States—86,212 more deaths than in 2014. The crude death rate for 2015 (844.0 deaths per 100,000 population) was 2.5% higher than the 2014 rate (823.7) (Tables A, 1, 2, 7, and 9).

The age-adjusted death rate in 2015 was 733.1 deaths per 100,000 U.S. standard population—1.2% higher than the record low rate of 724.6 in 2014 (Tables A and 1). Age-adjusted death rates should be viewed as relative indexes rather than as actual measures of mortality risk. They are constructs that show what the level of mortality would be if no changes occurred in the age composition of the population from year to year. (For a discussion of age-adjusted death rates, see Technical Notes.) Thus, age-adjusted death rates are better indicators than unadjusted (crude) death rates for examining changes in the risk of death over a period of time when the age distribution of the population is changing. Age-adjusted death rates also are better indicators of relative risk when comparing mortality across geographic areas or between sex or race subgroups of the population that have different age distributions; see Technical Notes. Since 1980, the age-adjusted death rate decreased significantly every year except for 1983, 1985, 1988, 1993, 1999, 2005, 2008, 2013, and 2015 (Figure 1) (4).

Death rates by race and Hispanic origin

In 2015, age-adjusted death rates for the major race and ethnicity groups (Table 1) were:

- Non-Hispanic white population: 753.2 deaths per 100,000 U.S. standard population
- Non-Hispanic black population: 876.1
- Hispanic population: 525.3

In 2015, the age-adjusted death rate for the non-Hispanic black population was 1.2 times that for the non-Hispanic white population. The rate for the non-Hispanic white population was 1.4 times that for the Hispanic population (Table B). While the disparity between the non-Hispanic white and non-Hispanic black populations has been narrowing each year since 2005, the disparity between the Hispanic and non-Hispanic white populations has generally been widening. Since 2005, the age-adjusted rate declined 7.0% for the non-Hispanic white population, 17.0% for the non-Hispanic black population, and 16.3% for the Hispanic population (Table 1, Figure 2) (4).

From 2014 to 2015, age-adjusted death rates increased for non-Hispanic white males (1.0%), non-Hispanic white females (1.6%), and non-Hispanic black males (0.9%) (Tables A and 1). Observed changes in age-adjusted rates for non-Hispanic black female, Hispanic male, and Hispanic female populations were not statistically significant.

Mortality for Hispanic persons may be somewhat understated because of net underreporting of Hispanic origin on the death certificate (by an estimated 3%), while data for the non-Hispanic white and non-Hispanic black populations

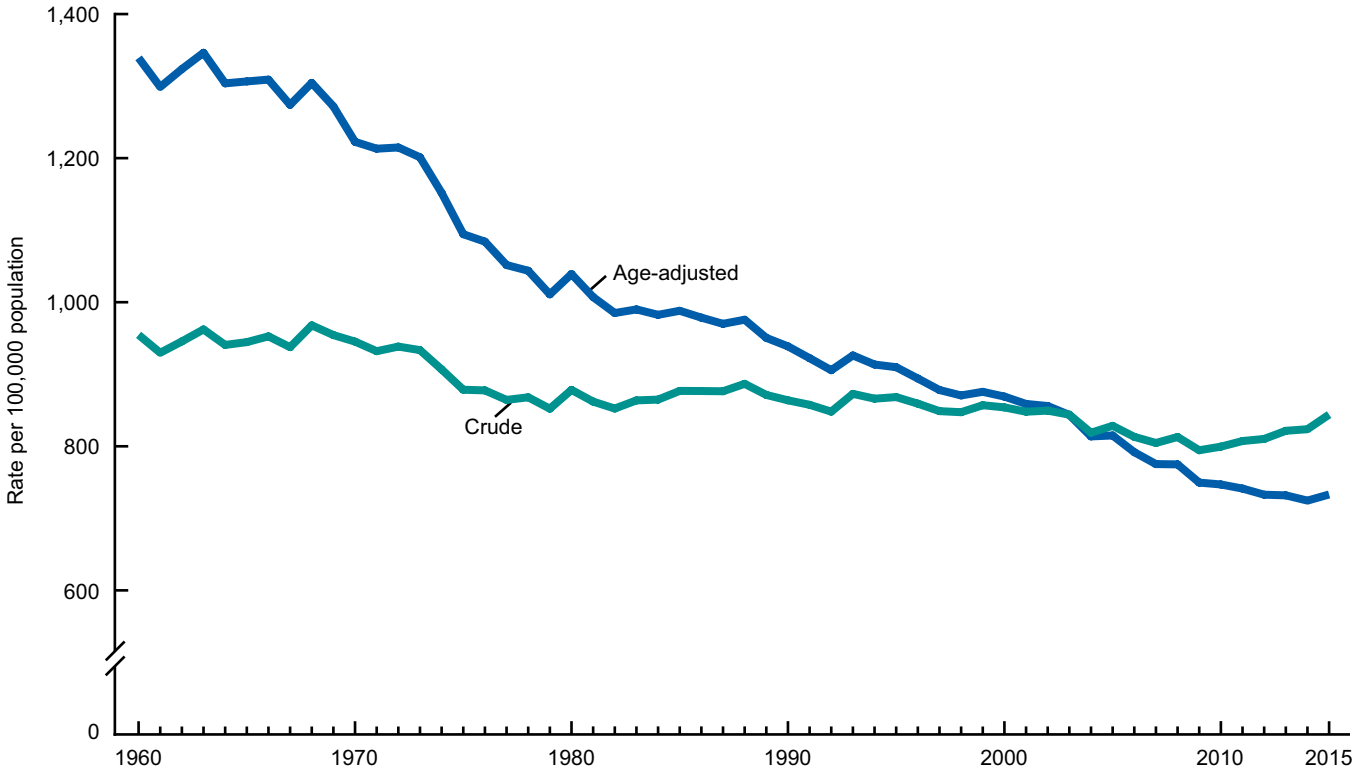
Table A. Percentage change in death rates and age-adjusted death rates in 2015 from 2014, by age, race and Hispanic origin, and sex: United States

[Based on death rates on an annual basis per 100,000 population, and age-adjusted rates per 100,000 U.S. standard population; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
Age (years)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
									Percent change									
All ages																		
Crude	2.5	2.6	2.4	2.6	2.6	2.7	2.6	3.3	1.9	4.4	4.8	3.9	4.2	3.5	5.0	3.7	4.0	3.3
Age adjusted	1.2	0.9	1.2	1.4	1.0	1.6	0.6	0.9	0.0	1.1	1.6	0.3	1.5	1.0	1.9	0.4	0.3	0.2
Under 1 year[5]	0.3	0.1	0.5	–1.4	–1.6	–1.2	2.0	2.5	1.3	–5.3	–10.3	1.2	7.9	10.6	4.6	–0.4	–1.6	1.0
1–4	3.8	4.9	1.4	1.3	2.4	–0.5	5.1	8.4	0.0	1.8	–21.0	55.6	9.3	2.7	18.5	5.9	9.5	1.7
5–14	3.9	0.7	6.7	6.6	2.1	14.3	2.7	0.4	5.3	29.6	22.5	38.0	5.9	2.9	13.4	–5.4	–2.4	–11.3
15–24	6.1	6.1	6.4	4.3	3.1	6.9	11.1	11.6	9.0	–2.6	–4.1	0.8	6.9	6.9	6.7	7.9	9.0	4.8
25–34	7.7	7.9	7.3	7.8	7.9	7.7	7.1	7.7	4.9	8.7	5.2	15.7	3.3	2.9	4.0	8.0	7.9	8.5
35–44	2.8	4.3	0.3	3.4	4.7	1.3	3.1	5.9	–0.9	2.2	6.4	–4.3	2.0	0.9	3.4	1.2	2.3	–1.0
45–54	–0.2	–0.2	–0.2	0.1	–0.2	0.7	0.1	1.3	–1.6	6.2	9.2	2.1	–1.4	–4.7	3.6	–0.4	–0.2	–0.7
55–64	0.6	0.5	0.6	0.9	0.7	1.1	0.1	0.4	–0.3	2.4	1.7	3.4	–1.0	–3.0	1.9	–0.6	0.1	–2.0
65–74	0.6	0.7	0.5	0.7	0.6	0.7	–0.3	0.0	–0.6	0.7	1.4	–0.1	1.1	2.0	0.2	1.2	1.2	1.2
75–84	0.3	0.1	0.4	0.4	0.0	0.6	0.2	0.9	–0.6	0.8	2.2	–0.6	1.5	1.6	1.1	0.4	0.6	0.2
85 and over	2.0	1.0	2.5	2.5	1.6	3.0	0.3	–1.4	1.0	–3.4	–5.1	–2.5	2.1	1.6	2.4	–0.5	–1.7	0.2

[1]Includes deaths for origin not stated.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Death rates for "Under 1 year" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.



NOTE: Crude death rates are on an annual basis per 100,000 population; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Figure 1. Crude and age-adjusted death rates: United States, 1960–2015

are not affected by problems of underreporting (18,19); see Technical Notes. Misclassification of Hispanic origin on the death certificate is relatively stable across age groups (18). Rates for the non-Hispanic American Indian or Alaska Native (AIAN) population should be interpreted with caution because of the high percentage of racial misclassification on death certificates (33%). Rates for non-Hispanic Asian or Pacific Islander (API) are affected much less by underreporting on the death certificate (3%) (18).

Death rates by age and sex

For the total population, age-specific death rates increased significantly from 2014 to 2015 for age groups 5–14, 15–24, 25–34, 35–44, 55–64, 65–74, and 85 and over. Changes in rates for other age groups were not significant (Tables A, 5, and 7; Figure 3).

The age-adjusted death rate for males was 1.4 times the rate for females in 2015 (Table B). The male-to-female death rate ratio was unchanged from the ratio in 2014.

The death rate for males increased significantly for age groups 15–24, 25–34, 35–44, 65–74, and 85 and over. Changes in rates for males in other age groups were not statistically significant. The death rate for females increased significantly for age groups 5–14, 15–24, 25–34, and 85 and over. Changes in rates for females in other age groups were not statistically significant.

Race and ethnicity—For the total non-Hispanic white population in 2015 compared with 2014, age-specific death rates increased significantly for age groups 5–14, 15–24, 25–34, 35–44, 55–64, 65–74, and 85 and over (Tables A and 2). Rates for non-Hispanic white males increased for age groups 15–24, 25–34, 35–44, 55–64, 65–74, and 85 and over. Rates for non-Hispanic white females increased for age groups 5–14, 15–24, 25–34, 55–64, 75–84, and 85 and over.

For the total non-Hispanic black population in 2015 compared with 2014, age-specific death rates increased for age groups 15–24, 25–34, and 35–44. Rates for non-Hispanic black males increased for the same age groups, 15–24, 25–34, and 35–44. For non-Hispanic black females, rates increased for age group 15–24.

Age-specific rates increased from 2014 to 2015 for the total non-Hispanic AIAN population for age group 45–54 and for the non-Hispanic AIAN male population for the same age group, 45–54.

For the total non-Hispanic API population, age-specific rates increased from 2014 to 2015 for age group 85 and over.

For the total Hispanic population in 2015 compared with 2014, age-specific death rates increased for age groups 15–24 and 25–34. Rates for Hispanic males increased for the same age groups, 15–24 and 25–34. For Hispanic females, rates increased for age group 25–34.

Table B. Number of deaths, percentage of total deaths, death rates, and age-adjusted death rates for 2015, percentage change in age-adjusted death rates in 2015 from 2014, and ratio of age-adjusted death rates by sex and race and Hispanic origin for the 15 leading causes of death for total population in 2015: United States

[Crude death rates on an annual basis per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, Tenth Revision* (ICD–10); see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

					Age-adjusted death rate				
						Percent change	Ratio		
Rank[1]	Cause of death (based on ICD–10)	Number	Percent of total deaths, 2015	Crude death rate, 2015	2015	2014 to 2015	Male to female	Non-Hispanic black[2] to Non-Hispanic white	Non-Hispanic white[2] to Hispanic
. . .	All causes	2,712,630	100.0	844.0	733.1	1.2	1.4	1.2	1.4
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	633,842	23.4	197.2	168.5	0.9	1.6	1.2	1.5
2	Malignant neoplasms (C00–C97)	595,930	22.0	185.4	158.5	–1.7	1.4	1.1	1.5
3	Chronic lower respiratory diseases (J40–J47)	155,041	5.7	48.2	41.6	2.7	1.2	0.6	2.6
4	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	146,571	5.4	45.6	43.2	6.7	2.0	0.8	1.7
5	Cerebrovascular diseases (I60–I69)	140,323	5.2	43.7	37.6	3.0	1.0	1.4	1.1
6	Alzheimer's disease (G30)	110,561	4.1	34.4	29.4	15.7	0.7	0.9	1.3
7	Diabetes mellitus (E10–E14)	79,535	2.9	24.7	21.3	1.9	1.5	2.0	0.8
8	Influenza and pneumonia (J09–J18)	57,062	2.1	17.8	15.2	0.7	1.3	1.1	1.4
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)	49,959	1.8	15.5	13.4	1.5	1.4	2.1	1.1
10	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	44,193	1.6	13.7	13.3	2.3	3.5	0.3	2.7
11	Septicemia (A40–A41)	40,773	1.5	12.7	11.0	2.8	1.2	1.8	1.3
12	Chronic liver disease and cirrhosis (K70,K73–K74)	40,326	1.5	12.5	10.8	3.8	1.9	0.7	0.7
13	Essential hypertension and hypertensive renal disease (I10,I12,I15)	32,200	1.2	10.0	8.5	3.7	1.1	2.2	1.0
14	Parkinson's disease (G20–G21)	27,972	1.0	8.7	7.7	4.1	2.3	0.5	1.5
15	Pneumonitis due to solids and liquids (J69)	19,803	0.7	6.2	5.3	3.9	1.8	0.9	1.6
. . .	All other causes (residual)	538,539	19.9	167.6	. . .	. . .	. . .	. . .	. . .

. . . Category not applicable.

[1]Based on number of deaths; see Technical Notes.

[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

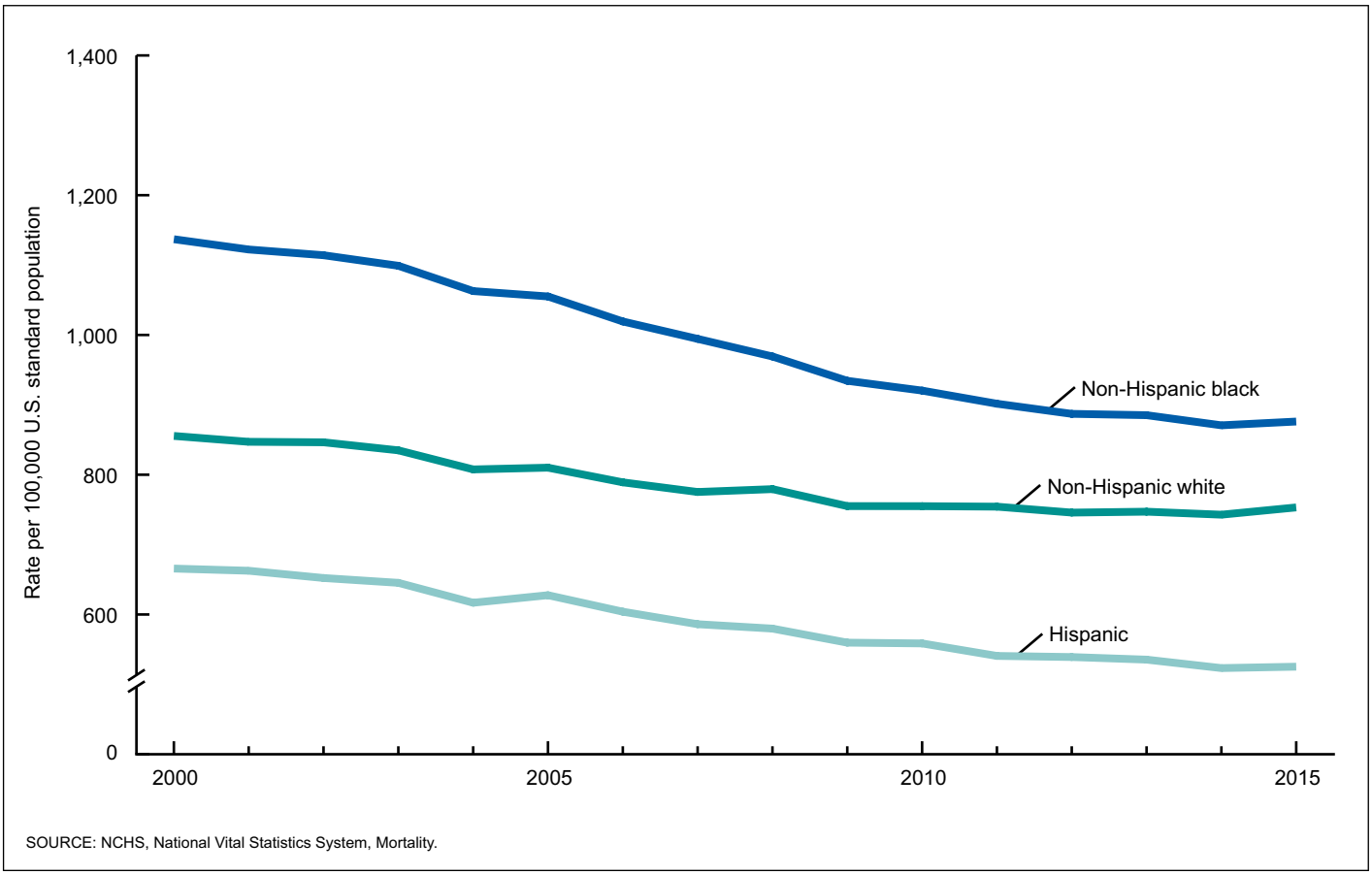


Figure 2. Age-adjusted death rates, by race and Hispanic origin: United States, 2000–2015

Other observed changes from 2014 to 2015 in age-specific rates by race and ethnicity and sex were not statistically significant.

Death rates for the non-Hispanic AIAN population are not adjusted for misclassification of race and ethnicity. Given that the rates for the non-Hispanic AIAN population are underestimated by about 33% (18), disparities in age-adjusted death rates should be interpreted with caution when making comparisons across racial and ethnic groups. For the non-Hispanic API population, death rates also are not adjusted for misclassification and are underestimated by about 3% due to underreporting on death certificates (18). Although the level of underestimation for this population is not as great as for the non-Hispanic AIAN population, caution should be exercised when interpreting rate disparities involving the non-Hispanic API population and other groups.

Death rates for the Hispanic population are not adjusted for misclassification (see Technical Notes). Because these rates are both unadjusted for misclassification and underestimated by about 3.0% (18), caution should be exercised when interpreting rate disparities between Hispanic and non-Hispanic populations.

Expectation of life at birth and at specified ages

Life expectancy at birth represents the average number of years that a group of infants would live if the group was to experience throughout life the age-specific death rates present in the year of birth.

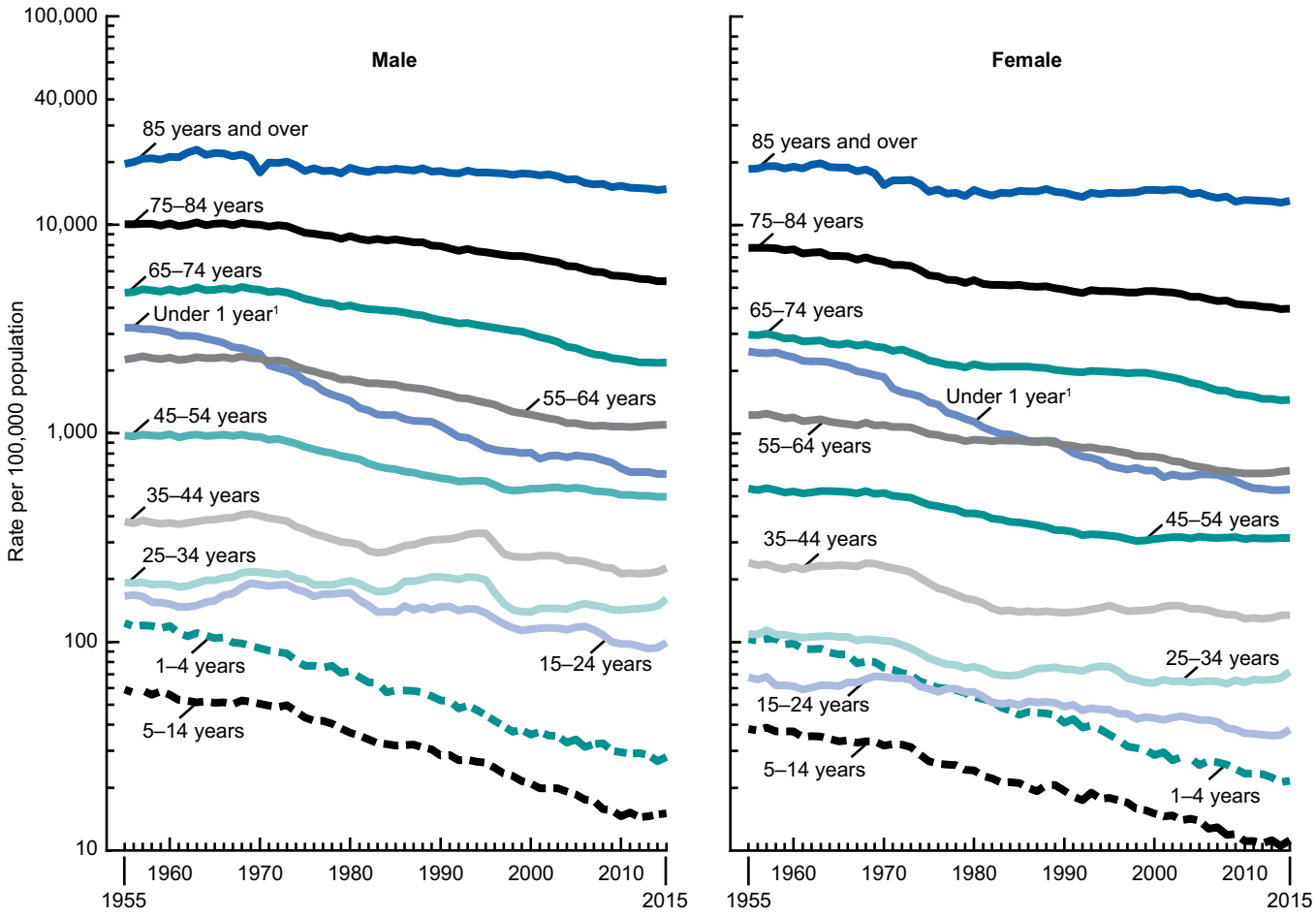
Life table data shown in this report for 2001–2015 are based on a revised methodology first presented with final data reported for 2008. The life table methodology was revised by changing the smoothing technique used to estimate the life table functions at the oldest ages. This revision improves on the methodologies used previously; see Technical Notes.

The methods used to produce life expectancies by Hispanic origin are based on death rates adjusted for misclassification (see Technical Notes). In contrast, the age-specific and age-adjusted death rates shown in this report for the Hispanic population are not adjusted for misclassification of Hispanic origin. Thus, this report shows Hispanic deaths and death rates as collected by the registration areas, and these match the deaths and death rates produced using the mortality data file.

Life tables were generated for both sexes and by each sex for the following populations:

- Total U.S. population
- Non-Hispanic white population
- Non-Hispanic black population
- Hispanic population

In 2015, life expectancy at birth for the U.S. population was 78.8 years, 0.1 year lower than 2014 (Tables 3 and 4). The trend in U.S. life expectancy since 1900 has been one of gradual



[1]Rates are based on population estimates, which differ from infant mortality rates (based on live births); see Figure 7 for infant mortality rates and Technical Notes for further discussion of the difference.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Figure 3. Death rates, by age and sex: United States, 1955–2015

improvement, with occasional single-year decreases. In 2015, life expectancy for males (76.3 years) was 0.2 year lower than in 2014, and for females (81.2 years), it was 0.1 year lower. From 1900 through the late 1970s, the gap in life expectancy between the sexes widened (3), from 2.0 to 7.8 years (data prior to 1975 are not shown). The gap between sexes has narrowed since its peak in the 1970s. In 2015, the difference in life expectancy between the sexes increased for the first time since 1990 to 4.9 years, a 0.1-year increase from 4.8 years in 2014.

Life expectancy decreased by 0.1 year for the non-Hispanic white population (from 78.8 years in 2014 to 78.7 in 2015) and by 0.2 year for the non-Hispanic black population (from 75.3 to 75.1). The difference in life expectancy between the non-Hispanic white and non-Hispanic black populations increased by 0.1 year, from 3.5 years in 2014 to 3.6 years in 2015 (Table 4). Life expectancy figures by Hispanic origin have been available starting with data for 2006 (20). The non-Hispanic white–non-Hispanic black gap has generally been narrowing since 2006, when it was 5.1 years (Table 4; Figure 4).

Life expectancy for the Hispanic population decreased by 0.1 year, from 82.1 years in 2014 to 82.0 years in 2015 (Tables 3 and 4). Since 2006, life expectancy for the Hispanic population has increased by 1.7 years. The difference in life expectancy between the non-Hispanic white and Hispanic populations was 3.3 years in 2015, unchanged from 2014 (Table 4). The non-Hispanic white–Hispanic gap has gradually been widening since 2006 (Table 4; Figure 4).

Among the six Hispanic origin–race–sex groups in 2015, Hispanic females had the highest life expectancy at birth (84.3 years), followed by non-Hispanic white females (81.1), Hispanic males (79.3), non-Hispanic black females (78.1), non-Hispanic white males (76.3), and non-Hispanic black males (71.8) (Tables 3 and 4; Figure 5).

Life expectancy for each of the six Hispanic origin–race–sex groups decreased in 2015 from 2014. Life expectancy decreased 0.2 year for non-Hispanic white males, 0.1 year for non-Hispanic white females, 0.4 year for non-Hispanic black males, 0.1 year for non-Hispanic black females, 0.1 year for Hispanic males, and 0.2 year for Hispanic females (Table 4).

Life expectancy for both males and females was higher by 3 years or more for the Hispanic population than for the non-Hispanic white and non-Hispanic black populations. Various

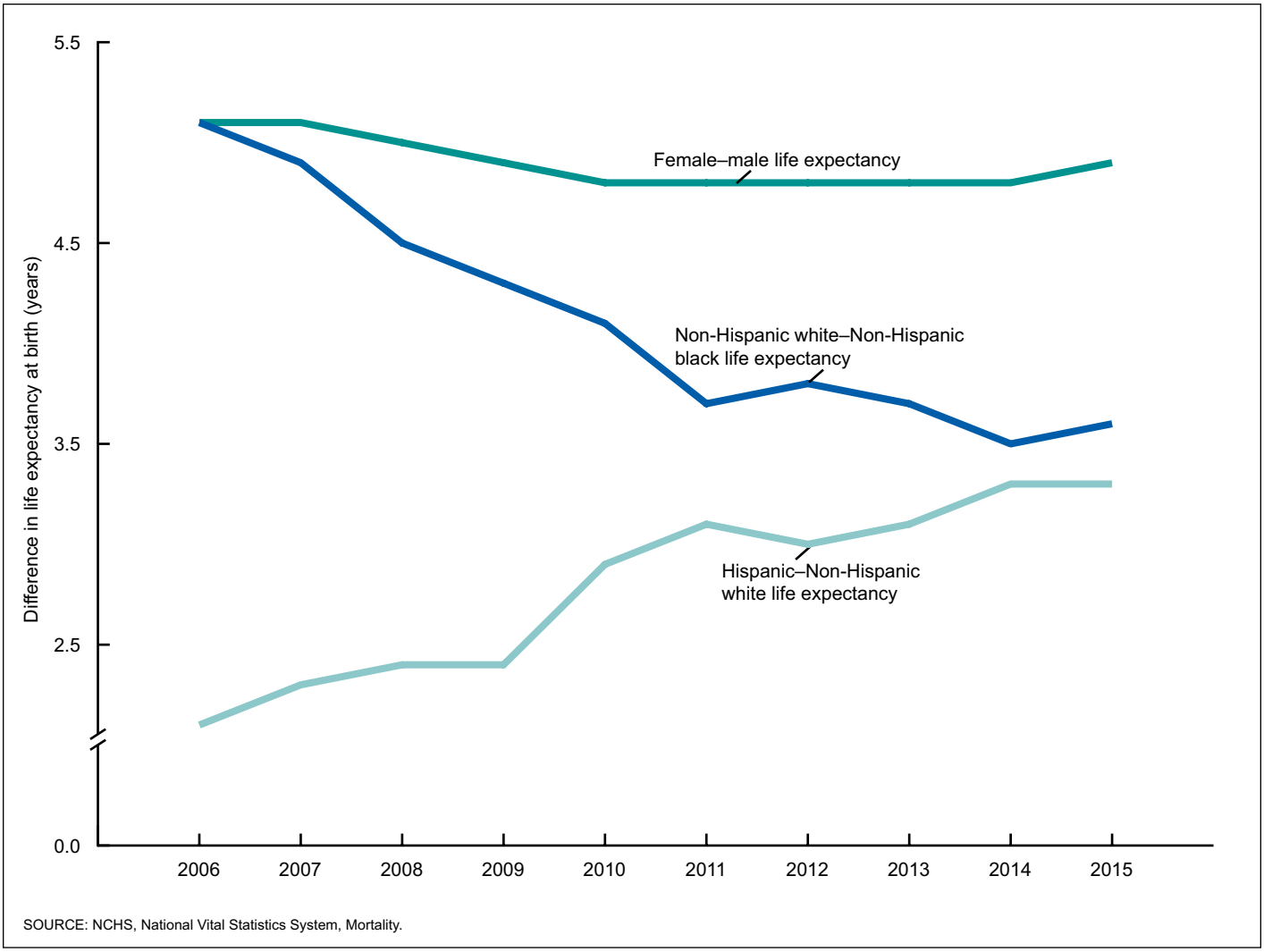


Figure 4. Differences in female–male, non-Hispanic white–non-Hispanic black, and Hispanic–non-Hispanic white life expectancy: United States, 2006–2015

hypotheses have been proposed to explain favorable mortality outcomes among Hispanic persons. The most prevalent hypotheses are the healthy migrant effect, which argues that Hispanic immigrants are selected for their good health and robustness; the "salmon bias" effect, which posits that U.S. residents of Hispanic origin may return to their country of origin to die or when ill; and the "cultural effects," which argues that culturally influenced family structure, lifestyle behaviors, and social networks may confer a protective barrier against the negative effects of low socioeconomic and minority status (21,22).

Life tables shown in this report may be used to compare life expectancies at selected ages from birth to 100 years. For example, on the basis of mortality experienced in 2015, a person aged 50 could expect to live an average of 31.6 more years, for a total of 81.6 years. A person aged 65 could expect to live an average of 19.4 more years, for a total of 84.4 years, and a person aged 85 could expect to live an average of 6.6 more years, for a total of 91.6 years (Table 3). While life expectancy at some ages decreased from 2014 to 2015, especially at ages 30 and younger, life expectancy at age 65 remained the same at 19.4 years (Table 3) (3,23).

Leading causes of death

The 15 leading causes of death in 2015 accounted for 80.1% of all deaths in the United States (Table B). The leading causes of death in 2015 remained the same as in 2014. Causes of death are ranked according to the number of deaths; for ranking procedures, see Technical Notes. By rank, the 15 leading causes of death in 2015 were:

1. Diseases of heart (heart disease)
2. Malignant neoplasms (cancer)
3. Chronic lower respiratory diseases
4. Accidents (unintentional injuries)
5. Cerebrovascular diseases (stroke)
6. Alzheimer's disease
7. Diabetes mellitus (diabetes)
8. Influenza and pneumonia
9. Nephritis, nephrotic syndrome and nephrosis (kidney disease)

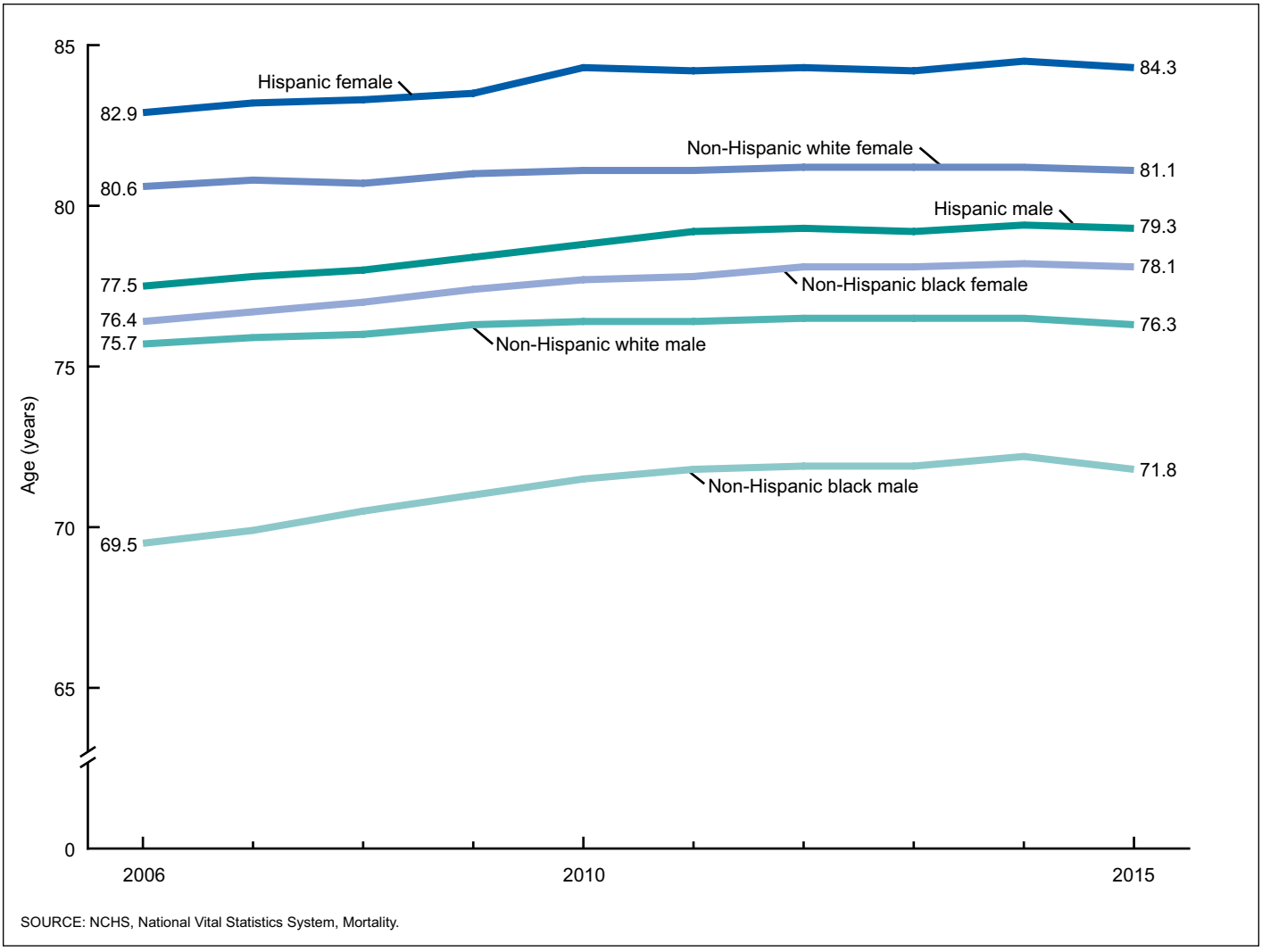


Figure 5. Life expectancy, by race and Hispanic origin and sex: United States, 2006–2015

10. Intentional self-harm (suicide)
11. Septicemia
12. Chronic liver disease and cirrhosis
13. Essential hypertension and hypertensive renal disease (hypertension)
14. Parkinson's disease
15. Pneumonitis due to solids and liquids

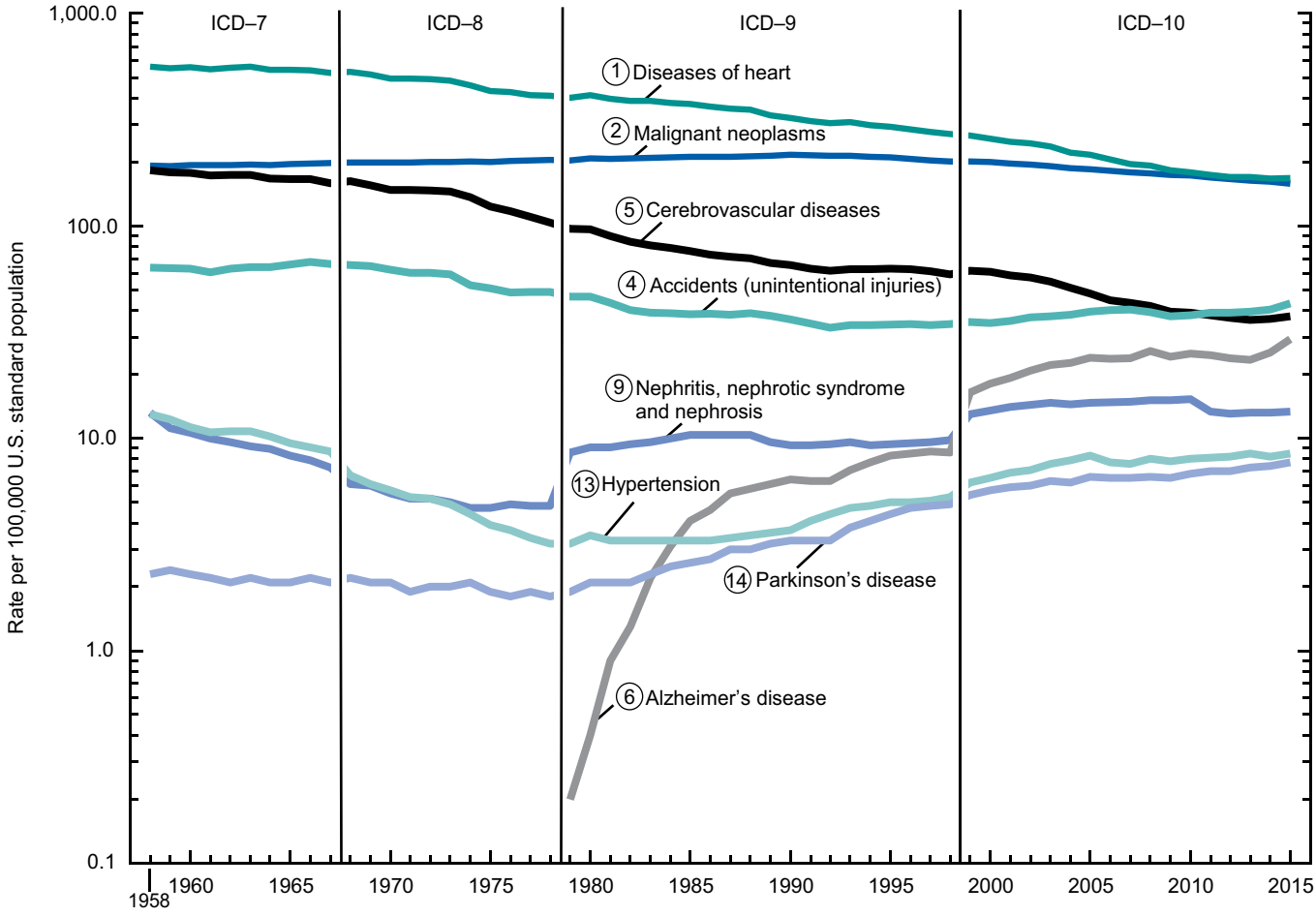
Death rates vary greatly by age. As a result, the shifting age distribution of a population can significantly influence changes in crude death rates over time. Age-adjusted death rates, in contrast, eliminate the influence of such differences in the population age structure. Therefore, whereas causes of death are ranked according to the number of deaths, age-adjusted death rates are used to depict trends for leading causes of death in this report because they are better than crude rates for showing changes in mortality over time and among causes of death (Tables B and 5; Figure 6).

From 2014 to 2015, age-adjusted death rates decreased significantly for one of the 15 leading causes of death and increased for 13 of the 15 leading causes (Table B). The rate for the top leading cause of death, heart disease, increased 0.9% in 2015 from 2014, the first increase since 1993 (Tables B and 5; Figure 6) (4). The rate for the second leading cause of death, cancer, decreased 1.7%, continuing a gradual but consistent downward trend since 1993. Deaths from these two diseases combined accounted for 45.3% of deaths in the United States in 2015.

Other leading causes of death that showed significant increases in 2015 relative to 2014 were Chronic lower respiratory diseases (2.7%), unintentional injuries (6.7%), stroke (3.0%), Alzheimer's disease (15.7%), diabetes (1.9%), kidney disease (1.5%), suicide (2.3%), Septicemia (2.8%), Chronic liver disease and cirrhosis (3.8%), hypertension (3.7%), Parkinson's disease (4.1%), and Pneumonitis due to solids and liquids (3.9%).

The observed change from 2014 to 2015 in the age-adjusted death rate for Influenza and pneumonia was not significant.

Assault (homicide), the 16th leading cause of death in 2015, dropped from among the 15 leading causes of death in 2010 but is still a major issue for some age groups. In 2015, homicide was among the 15 leading causes of death for age groups under 1 year (14th), 1–4 (3rd), 5–14 (5th), 15–24 (3rd), 25–34 (3rd), 35–44 (5th), and 45–54 (11th) (4).



NOTES: ICD is the *International Classification of Diseases*. Circled numbers indicate ranking of conditions as leading causes of death in 2015.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Figure 6. Age-adjusted death rates for selected leading causes of death: United States, 1958–2015

Although Human immunodeficiency virus (HIV) disease has not been among the 15 leading causes of death since 1997 (24), it is still considered a major public health problem for some age groups. Historically, for all ages combined, HIV disease mortality reached its highest level in 1995 after a period of increase from 1987 through 1994. Subsequently, the rate for this disease decreased an average of 33.0% per year from 1995 through 1998, and 6.2% per year from 1999 through 2015 (4,25). In 2015, HIV disease remained among the 15 leading causes of death for age groups 15–24 (13th), 25–34 (9th), 35–44 (9th), 45–54 (13th), and 55–64 (14th). Among these age groups, the ranking of HIV disease changed between 2014 and 2015 for those aged 25–34, dropping from 8th leading cause in 2014 to 9th leading cause in 2015, and for those aged 45–54, dropping from 11th leading cause to 13th leading cause (4).

Enterocolitis due to *Clostridium difficile* (*C. difficile*)—a predominantly antibiotic-associated inflammation of the intestines caused by *C. difficile*, a gram-positive, anaerobic, spore-forming bacillus—is of growing concern. The disease is often acquired in hospitals or other health care facilities with long-term patients or residents (26,27). The number of deaths from *C. difficile* climbed from 793 deaths in 1999 to a high of 8,085 deaths in 2011 (4,25). In 2015, the number of deaths from *C. difficile* was 7,410. In 2015, the age-adjusted death rate for this cause was 2.0 deaths per 100,000 U.S. standard population, an increase of 5.3% from the rate in 2014 (1.9). In 2015, *C. difficile* ranked as the 18th leading cause of death for the population aged 65 and over. Approximately 87% of deaths from *C. difficile* occurred among people aged 65 and over (Table 6).

The relative risk of death in one population group compared with another can be expressed as a ratio. Ratios based on age-adjusted death rates show that males have higher rates than females for 13 of the 15 leading causes of death (Table B), with rates for males being at least twice as great as those for females for 3 of these leading causes. The largest ratio was for suicide (3.5). Other large ratios were evident for Parkinson's disease (2.3), unintentional injuries (2.0), Chronic liver disease and cirrhosis (1.9), Pneumonitis due to solids and liquids (1.8), heart disease (1.6), diabetes (1.5), cancer and kidney disease (1.4 each), Influenza and pneumonia (1.3), Chronic lower respiratory diseases and Septicemia (1.2 each), and hypertension (1.1). Age-adjusted rates were lower for males than for females for one leading cause, Alzheimer's disease (0.7).

Age-adjusted death rates for the non-Hispanic black population were higher than for the non-Hispanic white population for 8 of the 15 leading causes of death (Table B). The largest ratio was for hypertension (2.2). Other causes for which the ratio was high include kidney disease (2.1), diabetes (2.0), Septicemia (1.8), stroke (1.4), heart disease (1.2), and cancer and Influenza and pneumonia (1.1 each). For 7 of the leading causes, age-adjusted rates were lower for the non-Hispanic black population than for the non-Hispanic white population. The smallest non-Hispanic black–to–non-Hispanic white ratio was for suicide (0.3); that is, the risk of dying from suicide was nearly triple for the non-Hispanic white population than for the non-Hispanic black population. Other conditions with a low non-Hispanic black–to–non-Hispanic white ratio were Parkinson's disease (0.5), Chronic lower respiratory diseases (0.6), Chronic liver disease and cirrhosis (0.7), unintentional injuries (0.8), and Alzheimer's disease and Pneumonitis due to solids and liquids (0.9 each).

Leading causes of death in 2015 for the total population and for specific subpopulations are further detailed in a companion *National Vital Statistics Report* on leading causes by age, race, Hispanic origin, and sex (2).

Age-adjusted death rates for the non-Hispanic white population were higher than for the Hispanic population for 12 of the 15 leading causes of death (Table B). The largest ratio was for suicide (2.7). Other causes for which the ratio was high include Chronic lower respiratory diseases (2.6), unintentional injuries (1.7), Pneumonitis due to solids and liquids (1.6), heart disease, cancer, and Parkinson's disease (1.5 each), Influenza and pneumonia (1.4), Alzheimer's disease and Septicemia (1.3 each), and stroke and kidney disease (1.1 each). Age-adjusted rates were lower for the non-Hispanic white population than for the Hispanic population for Chronic liver disease and cirrhosis (0.7) and diabetes (0.8).

Other select causes

Drug-induced mortality

In 2015, a total of 55,403 persons died of drug-induced causes in the United States (Tables 5, 6, 8, and I–1). This category includes deaths from poisoning and medical conditions caused by use of legal or illegal drugs, as well as deaths from poisoning due to medically prescribed and other drugs. It excludes unintentional injuries, homicides, and other causes indirectly related to drug use, as well as newborn deaths due to the mother's drug use. (For a list of drug-induced causes, see Technical Notes.)

In 2015, the age-adjusted death rate for drug-induced causes for the total population increased significantly, by 11.0% from 15.5 in 2014 to 17.2 in 2015 (Tables 5, 10, and I–1). For males in 2015, the age-adjusted death rate for drug-induced causes was 1.8 times the rate for females. The rate for drug-induced causes increased 13.5% for males and 6.8% for females in 2015 from 2014. The age-adjusted death rate for non-Hispanic white males was 47.1% higher than for non-Hispanic black males and 135.0% higher than for Hispanic males. The rate for non-Hispanic white females was 98.8% higher than for non-Hispanic black females and 255.3% higher than for Hispanic females.

Among the major race–ethnicity–sex groups, the age-adjusted death rates for drug-induced causes increased significantly in 2015 from 2014 for non-Hispanic white males (13.2%), non-Hispanic white females (9.2%), non-Hispanic black males (19.9%), and Hispanic males (13.6%). The rates for non-Hispanic black females and Hispanic females did not change significantly.

Alcohol-induced mortality

In 2015, a total of 33,171 persons died of alcohol-induced causes in the United States (Tables 5, 6, 8, and I–2). This category includes deaths from dependent and nondependent use of alcohol, as well as deaths from accidental poisoning by alcohol. It excludes unintentional injuries, homicides, and other causes indirectly related to alcohol use, as well as deaths due to fetal alcohol syndrome. For a list of alcohol-induced causes, see Technical Notes.

The age-adjusted death rate for alcohol-induced causes for the total population increased significantly, by 7.1% from 8.5 in 2014 to 9.1 in 2015 (Tables 5, 10, and I–2). For males, the age-adjusted death rate for alcohol-induced causes in 2015 was 2.7 times the rate for females. The rate for alcohol-induced causes increased 5.4% for males and 8.7% for females in 2015 from 2014. The age-adjusted death rate for non-Hispanic white males was 34.0% higher than for non-Hispanic black males and 18.3% lower than for Hispanic males. The rate for non-Hispanic white females was 43.6% higher than for non-Hispanic black females and 60.0% higher than for Hispanic females.

Among the major race–ethnicity–sex groups, the age-adjusted rate for alcohol-induced death increased significantly in 2015 from 2014 for non-Hispanic white males (6.2%), non-Hispanic white females (9.8%), and non-Hispanic black females (14.7%). The rates for non-Hispanic black males, Hispanic males, and Hispanic females did not change significantly.

Firearm mortality

In 2015, 36,252 persons died from injury by firearms in the United States (Tables 5, 6, 8, and I–3). In 2015, the age-adjusted death rate for injury by firearms for the total population increased significantly, by 7.8% from 10.3 in 2014 to 11.1 in 2015 (Tables 5, 10, and I–3). For males in 2015, the age-adjusted death rate for injury by firearms was 6.1 times the rate for females. The rate for firearm-related mortality increased 7.8% for males and 6.7% for females in 2015 from 2014. The age-adjusted death rate for non-Hispanic white males was 53.4% lower than for non-Hispanic black males and 78.2% higher than for Hispanic males. The rate for non-Hispanic white females was 5.3% lower than for non-Hispanic black females and 140.0% higher than for Hispanic females.

Among the major race–ethnicity–sex groups, the age-adjusted death rates for injury by firearms increased significantly in 2015 from 2014 for non-Hispanic white males (4.0%), non-Hispanic white females (5.9%), non-Hispanic black males (15.9%), non-Hispanic black females (11.8%), and Hispanic males (7.4%). The rate for Hispanic females did not change significantly.

Effect on life expectancy of changes in mortality by age and cause of death

Changes in mortality by age and cause of death can have a major effect on life expectancy. In other words, year-to-year changes in life expectancy may be influenced by changes in age-specific rates for certain causes, particularly for younger age groups. Life expectancy at birth for the total population decreased by 0.1 year in 2015 from 2014 primarily because of increases in mortality from unintentional injuries, Alzheimer's disease, homicide, Chronic lower respiratory diseases, and suicide. The decrease in life expectancy for the total population was slightly offset by decreases in mortality from cancer and Influenza and pneumonia. Life expectancy at birth for both males and females decreased between 2014 and 2015. For males, life expectancy decreased 0.2 year due to increases in mortality from unintentional injuries, homicide, Alzheimer's disease, and suicide. These increases were offset somewhat by decreases in mortality from cancer and Influenza and pneumonia. For the female population, life expectancy decreased by 0.1 year due to increases in mortality from Alzheimer's disease, unintentional injuries, Chronic lower respiratory diseases, heart disease, and stroke, which were offset by decreases in mortality from cancer and Influenza and pneumonia. (For a discussion of the major causes contributing to the change in life expectancy, see Technical Notes.)

Life expectancy for the non-Hispanic white population in 2015 decreased 0.1 year to 78.7 years (Table 4). This decrease was due to increases in mortality from unintentional injuries, Alzheimer's disease, suicide, Chronic lower respiratory diseases, and heart disease. These increases in mortality were offset to some extent by decreases for cancer and Influenza and pneumonia.

Life expectancy for the non-Hispanic black population in 2015 decreased 0.2 year to 75.1 years. This decrease was due to increases in mortality from homicide, unintentional injuries, Alzheimer's disease, stroke, and Chronic lower respiratory diseases. These increases in mortality were offset somewhat by decreases for cancer, HIV disease, and heart disease.

Life expectancy for the Hispanic population in 2015 decreased 0.1 year to 82.0 years. This decrease was due to increases in mortality from Alzheimer's disease, unintentional injuries, stroke, heart disease, and homicide. These increases in mortality were offset somewhat by decreases for cancer and Influenza and pneumonia.

The difference in life expectancy between the non-Hispanic white and non-Hispanic black populations increased 0.1 year in 2015 to 3.6 years (Table 4). The widening in the non-Hispanic black–non-Hispanic white life expectancy gap was due primarily to greater improvements in mortality for the non-Hispanic white population than for the non-Hispanic black population. For example, the non-Hispanic white population experienced greater improvements in mortality from homicide, kidney disease, and stroke, but this was offset by improvements for the non-Hispanic black population in cancer, heart disease, and suicide (data not shown).

Life table partitioning analysis indicates that the difference in 2015 of 3.3 years in life expectancy between the Hispanic and non-Hispanic white populations is mostly explained by lower mortality for the Hispanic population from cancer, heart disease, unintentional injuries, Chronic lower respiratory diseases, and suicide. (For a discussion of the major causes contributing to the difference in life expectancy, see Technical Notes.)

Injury mortality by mechanism and intent

In 2015, a total of 214,008 deaths were classified as injury-related (Table 11). Injury data are presented using the external cause-of-injury mortality matrix for ICD–10, as jointly conceived by the International Collaborative Effort (ICE) on Injury Statistics and the Injury Control and Emergency Health Services section, known as ICEHS, of the American Public Health Association (28,29). The ICD codes for injuries have two essential dimensions: the mechanism of the injury and its manner or intent. The mechanism involves the circumstances of the injury (e.g., fall, motor vehicle traffic, or poisoning). The manner or intent involves whether the injury was purposefully inflicted (where it can be determined) and, when intentional, whether the injury was self-inflicted (suicide) or inflicted upon another person (assault). In other report tables showing cause of death, the focus is on manner or intent, with subcategories showing selected mechanisms. The matrix has two distinct advantages for the analysis of injury mortality data: It contains a comprehensive list of mechanisms, and data can be displayed by mechanism with subcategories of intent, or vice versa. Four major mechanisms of injury in 2015—poisoning, motor-vehicle traffic, firearm, and fall—accounted for 76.9% of all injury deaths (Table 11).

A total of 57,567 deaths occurred as the result of poisonings in 2015, 26.9% of all injury deaths (Table 11). The age-adjusted death rate for poisoning increased significantly, by 9.9% from 16.2 deaths per 100,000 U.S. standard population in 2014 to 17.8 in 2015. The majority of poisoning deaths were either unintentional (82.5%) or suicides (11.8%). However, 5.5% of poisoning deaths were of undetermined intent. The age-adjusted death rate for unintentional poisoning increased 13.0%, from 13.1 in 2014 to 14.8 in 2015, and has more than tripled since 1999 (data prior to 2015 are not shown but are available through CDC WONDER at: https://wonder.cdc.gov/).

Motor vehicle traffic-related injuries in 2015 resulted in 36,161 deaths, accounting for 16.9% of all injury deaths (Table 11). The age-adjusted death rate for these injuries increased 5.8%, from 10.3 in 2014 to 10.9 in 2015.

In 2015, 36,252 persons died from firearm injuries in the United States (Table 11), accounting for 16.9% of all injury deaths that year. The age-adjusted death rate from firearm injuries (all intents) increased 7.8%, from 10.3 in 2014 to 11.1 in 2015. The two major component causes of firearm injury deaths in 2015 were suicide (60.7%) and homicide (35.8%). The age-adjusted death rate for firearm homicide increased 20.0%, from 3.5 in 2014 to 4.2 in 2015. The rate for firearm suicide did not change.

A total of 34,488 persons died as the result of falls in 2015, 16.1% of all injury deaths (Table 11). The age-adjusted death rate for falls increased 2.2%, from 9.1 in 2014 to 9.3 in 2015. The overwhelming majority of fall-related deaths (96.8%) were unintentional.

State of residence

Mortality patterns vary considerably by state (Tables 12 and 15). The state with the highest age-adjusted death rate in 2015 was Mississippi (963.7 per 100,000 U.S. standard population), with a rate 31.5% above the national rate (733.1). The state with the lowest age-adjusted death rate was Hawaii (588.2 per 100,000 U.S. standard population), with a rate 19.8% below the national rate. The age-adjusted death rate for Mississippi was 63.8% higher than the rate for Hawaii.

Variations in mortality by state are associated with differences in socioeconomic status, race, and ethnicity composition, as well as with differences in risk for specific causes of death (30).

Infant mortality

In 2015, a total of 23,455 deaths occurred in children under age 1 year (Tables C, D, 14, and 15). This number represents 240 more infant deaths in 2015 than in 2014. The ratio of male-to-female infant mortality rates was 1.2, the same as in 2014. The infant mortality rate was 5.90 per 1,000 live births, the neonatal mortality rate (deaths of infants aged 0–27 days per 1,000 live births) was 3.93, and the postneonatal mortality rate (deaths of infants aged 28 days through 11 months per 1,000 live births) was 1.96 in 2015 (Tables C and 13; Figure 7; see Technical Notes for information on alternative data sources). Changes in the infant and neonatal mortality rates from 2014 to 2015 were not significant. The postneonal mortality rate increased 4.3% in 2015 from 2014.

The 10 leading causes of infant death in 2015 accounted for 68.6% of all infant deaths in the United States (Table D). By rank, the 10 leading causes were:

1. Congenital malformations, deformations and chromosomal abnormalities (congenital malformations)
2. Disorders related to short gestation and low birth weight, not elsewhere classified (low birth weight)
3. Sudden infant death syndrome (SIDS)
4. Newborn affected by maternal complications of pregnancy (maternal complications)
5. Accidents (unintentional injuries)
6. Newborn affected by complications of placenta, cord and membranes (cord and placental complications)
7. Bacterial sepsis of newborn
8. Respiratory distress of newborn
9. Diseases of the circulatory system
10. Neonatal hemorrhage

In 2015, the 10 leading causes of infant death remained the same as in 2014, although maternal complications dropped from the 3rd leading cause in 2014 to the 4th leading cause in 2015, and SIDS rose from 4th leading cause to 3rd leading cause (25). Changes in rates by cause of death among the 10 leading causes were statistically significant for one condition. In 2015, unintentional injuries (5th leading cause of infant death) increased by 11.3% (Table D).

Infant mortality rates by race for non-Hispanic origin that are based on the mortality file may be somewhat understated and are better measured using data from the linked file of live births and infant deaths (31); see Technical Notes. Infant mortality data presented in this report use the general mortality file, not the linked file of live births and infant deaths. Infant mortality rates for the population of Hispanic origin are not adjusted for misclassification; see Technical Notes. Because these rates are not adjusted, caution should be exercised when interpreting rate disparities between Hispanic and non-Hispanic populations (18).

In 2015, the infant mortality rate for Hispanic infants was 5.20 deaths per 1,000 live births. By comparison, for non-Hispanic white infants, the infant mortality rate was 4.82, and for non-Hispanic black infants, the rate was 11.73 (Table 13). The infant mortality rate did not change significantly in 2015 from 2014 for the non-Hispanic white, non-Hispanic black, and Hispanic populations.

Table C. Number of infant, neonatal, and postneonatal deaths and mortality rates, by sex: United States, 2014 and 2015

[Rates are infant (under 1 year), neonatal (under 28 days), and postneonatal (28 days–11 months) deaths per 1,000 live births in specified group]

Infant age and sex	2015		2014		Percent change[1] from 2014 to 2015
	Number	Rate	Number	Rate	
Infant					
Total	23,455	5.90	23,215	5.82	1.4
Male	13,008	6.39	12,886	6.31	1.3
Female	10,447	5.38	10,329	5.30	1.5
Neonatal					
Total	15,652	3.93	15,720	3.94	–0.3
Male	8,591	4.22	8,671	4.25	–0.7
Female	7,061	3.64	7,049	3.62	0.6
Postneonatal					
Total	7,803	1.96	7,495	1.88	4.3
Male	4,417	2.17	4,215	2.07	4.8
Female	3,386	1.74	3,280	1.68	3.6

[1]Based on a comparison of 2015 and 2014 mortality rates.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table D. Number of infant deaths, percentage of total infant deaths, and infant mortality rates for 2015, and percentage change in infant mortality rates from 2014 to 2015, for the 10 leading causes of infant death in 2015: United States

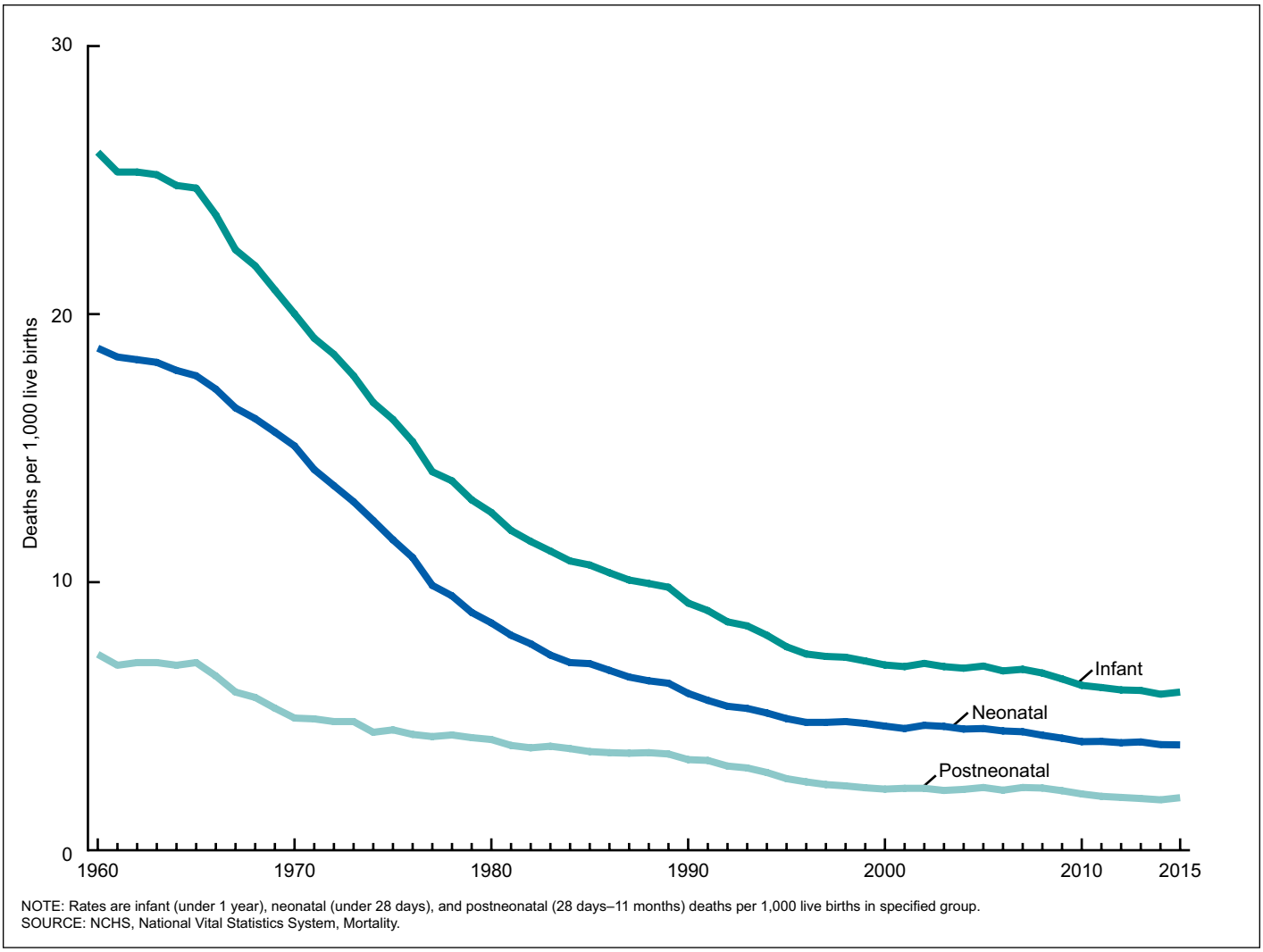
[Rates are infant deaths per 100,000 live births]

Rank[1]	Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Number	Percent of total deaths	Rate	Percent change[2] from 2014 to 2015
...	All causes	23,455	100.0	589.5	1.3
1	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,825	20.6	121.3	1.9
2	Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,084	17.4	102.7	–1.8
3	Sudden infant death syndrome (R95)	1,568	6.7	39.4	1.8
4	Newborn affected by maternal complications of pregnancy (P01)	1,522	6.5	38.3	–3.0
5	Accidents (unintentional injuries) (V01–X59)	1,291	5.5	32.4	11.3
6	Newborn affected by complications of placenta, cord and membranes (P02)	910	3.9	22.9	–5.4
7	Bacterial sepsis of newborn (P36)	599	2.6	15.1	11.0
8	Respiratory distress of newborn (P22)	462	2.0	11.6	0.9
9	Diseases of the circulatory system (I00–I99)	428	1.8	10.8	–2.7
10	Neonatal hemorrhage (P50–P52,P54)	406	1.7	10.2	–8.1
...	All other causes (residual)	7,360	31.4	185.0	...

... Category not applicable.
[1]Rank based on number of deaths; see Technical Notes. [2]Based on comparing 2015 with 2014 infant mortality rates.

NOTE: Due to rounding, percentage changes based on rates per 100,000 live births may differ from those computed using rates per 1,000 live births.

SOURCE: NCHS, National Vital Statistics System, Mortality.



NOTE: Rates are infant (under 1 year), neonatal (under 28 days), and postneonatal (28 days–11 months) deaths per 1,000 live births in specified group.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Figure 7. Infant, neonatal, and postneonatal mortality rates: United States, 1960–2015

Additional mortality tables based on 2015 final data

Trend data on drug-induced causes, alcohol-induced causes, and firearm-related injuries by race and Hispanic origin are available as supplemental tables (Tables I–1, I–2, and I–3) from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_6_tables.pdf. Mortality data by specified Hispanic subgroup, marital status, educational attainment, and injury at work are also available as supplemental tables (Tables I–4 through I–9).

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List of Detailed Tables

List of Internet Tables

(Available from: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_6_tables.pdf)

Table 1. Number of deaths, death rates, and age-adjusted death rates, by race and Hispanic origin, and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000, and 2010–2015

[Beginning in 1970, excludes deaths of nonresidents of the United States. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Year	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both exes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
									Number									
2015	2,712,630	1,373,404	1,339,226	2,123,631	1,063,705	1,059,926	315,254	161,850	153,404	18,039	9,869	8,170	65,277	33,306	31,971	179,457	98,170	81,287
2014	2,626,418	1,328,241	1,298,177	2,066,949	1,035,345	1,031,604	303,844	154,836	149,008	17,138	9,338	7,800	60,424	31,039	29,385	169,387	92,474	76,913
2013	2,596,993	1,306,034	1,290,959	2,052,660	1,021,135	1,031,525	299,227	152,661	146,566	16,219	8,840	7,379	58,702	30,343	28,359	163,241	88,880	74,361
2012	2,543,279	1,273,722	1,269,557	2,016,896	998,832	1,018,064	291,179	148,344	142,835	15,705	8,598	7,107	55,298	28,214	27,084	156,419	85,238	71,181
2011	2,515,458	1,254,978	1,260,480	2,006,319	989,835	1,016,484	286,797	145,052	141,745	15,181	8,175	7,006	52,346	26,909	25,437	149,635	81,887	67,748
2010	2,468,435	1,232,432	1,236,003	1,969,916	971,604	998,312	283,438	143,824	139,614	14,846	8,072	6,774	50,018	25,938	24,080	144,490	79,622	64,868
2000	2,403,351	1,177,578	1,225,773	1,959,919	944,781	1,015,138	282,676	143,297	139,379	11,025	5,973	5,052	34,226	18,653	15,573	107,254	60,172	47,082
1990	2,148,463	1,113,417	1,035,046	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1980	1,989,841	1,075,078	914,763	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1970	1,921,031	1,078,478	842,553	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1960	1,711,982	975,648	736,334	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1950	1,452,454	827,749	624,705	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1940	1,417,269	791,003	626,266	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
									Crude death rate[5]									
2015	844.0	868.0	820.7	1,055.3	1,072.5	1,038.5	754.6	809.4	704.3	670.7	747.4	596.7	341.5	364.9	320.1	317.1	343.2	290.4
2014	823.7	846.4	801.7	1,028.1	1,045.4	1,011.3	735.4	783.3	691.4	642.5	713.4	574.2	327.7	352.7	305.0	305.8	330.1	281.0
2013	821.5	839.1	804.4	1,021.6	1,032.1	1,011.5	733.4	782.5	688.4	613.7	681.4	548.3	331.8	359.2	306.7	301.9	323.7	279.4
2012	810.2	824.5	796.4	1,004.9	1,011.2	998.8	720.9	768.5	677.3	599.3	668.7	532.5	322.0	344.1	301.7	295.0	316.5	272.7
2011	807.3	818.7	796.3	1,001.0	1,004.1	998.1	718.0	760.4	679.2	584.2	640.9	529.5	315.7	339.9	293.7	287.5	309.7	264.6
2010	799.5	812.0	787.4	984.3	987.5	981.2	718.7	764.5	676.9	577.8	640.1	517.7	310.0	336.7	285.6	286.2	310.8	260.9
2000	854.0	853.0	855.0	993.2	978.5	1,007.3	805.5	859.5	756.7	470.3	517.0	425.0	301.4	338.3	266.5	303.8	331.3	274.6
1990	863.8	918.4	812.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1980	878.3	976.9	785.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1970	945.3	1,090.3	807.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1960	954.7	1,104.5	809.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1950	963.8	1,106.1	823.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1940	1,076.4	1,197.4	954.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

See footnotes at end of table.

Table 1. Number of deaths, death rates, and age-adjusted death rates, by race and Hispanic origin, and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000, and 2010–2015—Con.

[Beginning in 1970, excludes deaths of nonresidents of the United States. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Year	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both exes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Age-adjusted death rate[6]																	
2015	733.1	863.2	624.2	753.2	881.3	644.1	876.1	1,070.1	731.0	805.7	950.2	679.5	396.2	468.9	339.6	525.3	628.9	438.3
2014	724.6	855.1	616.7	742.8	872.3	633.8	870.7	1,060.3	731.2	796.9	935.0	677.4	390.5	464.2	333.3	523.3	626.8	437.5
2013	731.9	863.6	623.5	747.1	876.8	638.4	885.2	1,083.3	740.6	787.5	930.6	666.4	407.5	490.2	344.8	535.4	639.8	448.6
2012	732.8	865.1	624.7	745.8	876.2	637.6	887.1	1,086.4	742.1	787.8	929.9	666.3	409.6	486.3	351.4	539.1	643.9	452.5
2011	741.3	875.3	632.4	754.3	887.2	644.6	901.6	1,098.3	759.8	798.1	933.8	684.7	413.2	493.4	352.8	540.7	647.3	452.8
2010	747.0	887.1	634.9	755.0	892.5	643.3	920.4	1,131.7	770.8	818.8	965.8	696.8	425.6	513.0	360.6	558.6	677.7	463.4
2000	869.0	1,053.8	731.4	855.5	1,035.4	721.5	1,137.0	1,422.0	941.2	800.5	955.6	679.1	507.0	624.9	417.3	665.7	818.1	546.0
1990	938.7	1,202.8	750.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1980	1,039.1	1,348.1	817.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1970	1,222.6	1,542.1	971.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1960	1,339.2	1,609.0	1,105.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1950	1,446.0	1,674.2	1,236.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1940	1,785.0	1,976.0	1,599.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- Data not available.
[1]Includes deaths for origin not stated; see Technical Notes.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Per 100,000 population based on populations enumerated as of April 1 for census years and estimated as of July 1 for all other years; see Technical Notes.
[6]Per 100,000 U.S. standard population. For method of computation, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 2. Number of deaths and death rates, by age, race and Hispanic origin, and sex: United States, 2015

[Rates per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Age	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Number																	
All ages	2,712,630	1,373,404	1,339,226	2,123,631	1,063,705	1,059,926	315,254	161,850	153,404	18,039	9,869	8,170	65,277	33,306	31,971	179,457	98,170	81,287
Under 1 year	23,455	13,008	10,447	10,277	5,758	4,519	6,907	3,815	3,092	300	161	139	892	501	391	4,805	2,619	2,186
1–4	3,965	2,281	1,684	1,895	1,083	812	1,016	608	408	82	45	37	141	72	69	815	461	354
5–9	2,402	1,377	1,025	1,192	669	523	553	317	236	47	28	19	108	58	50	495	301	194
10–14	3,009	1,776	1,233	1,643	965	678	634	386	248	52	23	29	104	66	38	568	332	236
15–19	10,186	7,187	2,999	5,456	3,692	1,764	2,336	1,795	541	174	112	62	321	225	96	1,868	1,341	527
20–24	20,308	15,159	5,149	11,080	8,061	3,019	4,760	3,691	1,069	351	250	101	552	405	147	3,485	2,698	787
25–29	23,898	17,173	6,725	14,349	10,097	4,252	5,006	3,680	1,326	454	317	137	610	435	175	3,396	2,592	804
30–34	27,619	18,608	9,011	17,143	11,499	5,644	5,310	3,549	1,761	543	345	198	722	452	270	3,786	2,676	1,110
35–39	31,417	20,190	11,227	19,392	12,398	6,994	6,273	3,942	2,331	589	370	219	824	503	321	4,202	2,890	1,312
40–44	41,671	25,480	16,191	26,245	16,039	10,206	8,029	4,668	3,361	688	439	249	1,223	709	514	5,288	3,495	1,793
45–49	64,377	38,807	25,570	42,315	25,542	16,773	11,774	6,686	5,088	997	609	388	1,763	1,032	731	7,159	4,672	2,487
50–54	110,117	66,740	43,377	76,263	46,369	29,894	19,398	11,126	8,272	1,368	812	556	2,449	1,429	1,020	10,030	6,558	3,472
55–59	159,589	97,172	62,417	113,442	69,459	43,983	28,015	16,180	11,835	1,628	995	633	3,462	2,067	1,395	12,128	7,826	4,302
60–64	198,196	120,454	77,742	144,070	88,164	55,906	32,871	19,263	13,608	1,700	987	713	4,547	2,679	1,868	13,859	8,540	5,319
65–69	235,482	137,630	97,852	179,608	105,474	74,134	32,541	18,438	14,103	1,727	946	781	5,463	3,152	2,311	14,920	8,776	6,144
70–74	259,534	144,717	114,817	204,486	114,786	89,700	30,777	16,429	14,348	1,771	962	809	6,033	3,347	2,686	15,355	8,477	6,878
75–79	290,405	153,719	136,686	232,080	123,883	108,197	30,976	15,455	15,521	1,692	888	804	7,323	3,934	3,389	17,242	8,926	8,316
80–84	347,161	170,127	177,034	285,606	141,645	143,961	30,485	13,485	17,000	1,532	705	827	8,592	4,171	4,421	19,847	9,557	10,290
85 and over	859,701	321,704	537,997	737,032	278,085	458,947	57,576	18,325	39,251	2,344	875	1,469	20,147	8,069	12,078	40,203	15,428	24,775
Not stated	138	95	43	57	37	20	17	12	5	–	–	–	1	–	1	6	5	1

See footnotes at end of table.

Table 2. Number of deaths and death rates, by age, race and Hispanic origin, and sex: United States, 2015—Con.

[Rates per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Age	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Rate																	
All ages	844.0	868.0	820.7	1,055.3	1,072.5	1,038.5	754.6	809.4	704.3	670.7	747.4	596.7	341.5	364.9	320.1	317.1	343.2	290.4
Under 1 year[5]	589.6	639.2	537.7	494.6	541.1	445.7	1,123.1	1,215.0	1,027.3	732.6	771.9	691.8	405.5	444.1	364.9	469.2	500.4	436.6
1–4	24.9	28.0	21.6	22.9	25.5	20.1	41.6	48.9	34.0	51.2	55.2	47.0	15.3	15.3	15.4	19.8	22.0	17.5
5–9	11.7	13.2	10.2	11.1	12.1	10.0	17.7	20.0	15.4	22.8	26.9	*	9.2	9.8	8.7	9.5	11.3	7.6
10–14	14.6	16.9	12.2	14.6	16.7	12.4	20.7	24.9	16.4	25.4	22.2	28.7	8.8	11.2	6.5	11.5	13.3	9.7
15–19	48.3	66.6	29.1	46.2	61.0	30.7	72.8	110.1	34.2	82.4	104.5	59.6	27.4	38.0	16.6	39.6	55.6	22.9
20–24	89.3	129.9	46.5	87.2	123.6	48.8	133.0	203.3	60.7	153.8	214.8	90.3	39.2	56.7	21.2	72.4	108.0	34.0
25–29	106.4	150.5	60.8	111.6	154.7	67.2	154.6	230.1	80.9	219.7	303.7	133.9	37.5	54.7	21.0	74.9	108.7	37.5
30–34	127.4	170.9	83.5	136.7	181.9	90.8	185.5	258.2	118.4	296.0	380.3	213.4	44.1	58.3	31.4	85.0	115.1	52.2
35–39	154.2	198.5	110.1	165.0	209.4	119.9	233.6	310.1	164.9	354.2	450.8	260.0	54.0	70.5	39.5	99.0	132.2	63.8
40–44	206.1	254.0	159.0	218.8	266.3	170.9	307.2	380.5	242.4	430.0	560.3	305.0	80.8	99.9	63.9	134.5	175.4	92.4
45–49	308.7	375.5	243.1	320.2	386.4	253.9	446.6	539.0	364.5	609.4	766.2	461.3	131.4	164.3	102.5	204.8	262.9	144.7
50–54	493.0	608.7	381.5	504.2	619.1	391.5	703.1	861.7	563.6	760.1	940.7	593.7	199.7	249.6	156.0	329.5	430.3	228.4
55–59	731.8	916.9	556.8	733.0	913.5	558.7	1,078.9	1,347.6	847.8	956.6	1,242.4	702.6	311.0	404.0	231.9	494.7	651.1	344.2
60–64	1,039.3	1,321.2	781.1	1,025.1	1,293.8	772.2	1,571.1	2,052.3	1,179.6	1,235.8	1,532.5	974.6	479.7	629.6	357.6	753.9	976.4	551.9
65–69	1,465.6	1,811.8	1,155.1	1,464.5	1,790.6	1,163.1	2,069.7	2,684.5	1,592.8	1,627.1	1,891.8	1,391.2	712.2	920.3	544.3	1,099.0	1,401.2	840.2
70–74	2,260.1	2,732.5	1,855.8	2,286.1	2,736.6	1,888.3	2,964.9	3,780.6	2,377.6	2,578.8	3,032.6	2,189.2	1,166.9	1,446.7	940.3	1,678.8	2,097.7	1,347.2
75–79	3,574.7	4,257.1	3,028.8	3,655.3	4,316.7	3,109.8	4,311.4	5,424.0	3,580.2	3,794.0	4,501.4	3,232.8	2,001.1	2,414.7	1,669.3	2,670.2	3,264.0	2,234.0
80–84	5,986.2	7,051.4	5,227.4	6,176.9	7,236.0	5,399.3	6,427.4	7,879.9	5,607.5	5,770.0	6,503.1	5,264.2	3,592.7	4,221.3	3,150.2	4,556.7	5,480.7	3,939.8
85 and over	13,673.9	14,795.8	13,080.8	14,324.3	15,526.0	13,682.6	12,364.4	13,344.0	11,954.7	9,792.4	10,272.4	9,527.2	8,653.4	9,459.6	8,187.2	9,585.2	10,145.7	9,266.4

– Quantity zero.
* Figure does not meet standards of reliability or precision; see Technical Notes.
[1]Includes deaths for origin not stated; see Technical Notes.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Death rates for "Under 1 year" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 3. Life expectancy at selected ages, by race and Hispanic origin, and sex: United States, 2015

[Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Exact age (years)	Total[1]			Non-Hispanic white[2,3]			Non-Hispanic black[2,3]			Hispanic[3]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
0	78.8	76.3	81.2	78.7	76.3	81.1	75.1	71.8	78.1	82.0	79.3	84.3
1	78.2	75.8	80.6	78.1	75.7	80.4	75.0	71.8	78.0	81.4	78.8	83.7
5	74.3	71.9	76.7	74.2	71.8	76.5	71.1	67.9	74.1	77.5	74.8	79.8
10	69.3	66.9	71.7	69.2	66.9	71.5	66.2	63.0	69.1	72.5	69.9	74.8
15	64.4	62.0	66.8	64.3	61.9	66.6	61.2	58.0	64.2	67.5	64.9	69.9
20	59.5	57.2	61.8	59.4	57.1	61.7	56.5	53.3	59.3	62.7	60.1	65.0
25	54.8	52.5	57.0	54.6	52.4	56.8	51.8	48.9	54.5	57.9	55.4	60.1
30	50.1	47.9	52.1	49.9	47.8	52.0	47.2	44.4	49.7	53.1	50.7	55.2
35	45.4	43.3	47.4	45.3	43.3	47.2	42.6	39.9	45.0	48.3	45.9	50.3
40	40.7	38.7	42.6	40.6	38.7	42.5	38.1	35.5	40.3	43.5	41.2	45.5
45	36.1	34.2	37.9	36.0	34.2	37.8	33.6	31.1	35.8	38.8	36.6	40.7
50	31.6	29.8	33.4	31.6	29.8	33.3	29.3	26.9	31.4	34.2	32.1	36.0
55	27.3	25.6	28.9	27.3	25.6	28.9	25.3	23.0	27.2	29.8	27.7	31.4
60	23.3	21.7	24.7	23.2	21.7	24.6	21.6	19.4	23.3	25.5	23.6	26.9
65	19.4	18.0	20.6	19.3	18.0	20.5	18.1	16.2	19.6	21.4	19.7	22.7
70	15.7	14.5	16.6	15.6	14.4	16.6	14.8	13.2	16.0	17.6	16.1	18.5
75	12.3	11.2	13.0	12.2	11.2	12.9	11.8	10.5	12.7	13.9	12.7	14.7
80	9.2	8.4	9.8	9.1	8.3	9.7	9.2	8.1	9.8	10.6	9.5	11.1
85	6.6	6.0	7.0	6.6	5.9	7.0	6.9	6.1	7.3	7.8	6.9	8.1
90	4.6	4.1	4.9	4.6	4.1	4.8	5.1	4.5	5.4	5.5	4.8	5.6
95	3.2	2.9	3.4	3.2	2.8	3.3	3.8	3.3	3.9	3.8	3.3	3.9
100	2.3	2.1	2.4	2.2	2.0	2.3	2.9	2.5	2.9	2.7	2.4	2.7

[1]Includes races and origins not shown separately.

[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

[3]Life expectancies by Hispanic origin are based on death rates adjusted for misclassification; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 4. Life expectancy at birth, by race and Hispanic origin, and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, and 2000–2015

[Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Year	All races and origins[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Hispanic[3]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
2015[4,5]	78.8	76.3	81.2	78.7	76.3	81.1	75.1	71.8	78.1	82.0	79.3	84.3
2014[4–6]	78.9	76.5	81.3	78.8	76.5	81.2	75.3	72.2	78.2	82.1	79.4	84.5
2013[4–6]	78.8	76.4	81.2	78.8	76.5	81.2	75.1	71.9	78.1	81.9	79.2	84.2
2012[4,5]	78.8	76.4	81.2	78.9	76.5	81.2	75.1	71.9	78.1	81.9	79.3	84.3
2011[4,5]	78.7	76.3	81.1	78.7	76.4	81.1	75.0	71.8	77.8	81.8	79.2	84.2
2010[4,5]	78.7	76.2	81.0	78.8	76.4	81.1	74.7	71.5	77.7	81.7	78.8	84.3
2009[4]	78.5	76.0	80.9	78.7	76.3	81.0	74.4	71.0	77.4	81.1	78.4	83.5
2008[4]	78.2	75.6	80.6	78.4	76.0	80.7	73.9	70.5	77.0	80.8	78.0	83.3
2007[4]	78.1	75.5	80.6	78.4	75.9	80.8	73.5	69.9	76.7	80.7	77.8	83.2
2006[4]	77.8	75.2	80.3	78.2	75.7	80.6	73.1	69.5	76.4	80.3	77.5	82.9
2005[4]	77.6	75.0	80.1	---	---	---	---	---	---	---	---	---
2004[4]	77.6	75.0	80.1	---	---	---	---	---	---	---	---	---
2003[4]	77.2	74.5	79.7	---	---	---	---	---	---	---	---	---
2002[4]	77.0	74.4	79.6	---	---	---	---	---	---	---	---	---
2001[4]	77.0	74.3	79.5	---	---	---	---	---	---	---	---	---
2000	76.8	74.1	79.3	---	---	---	---	---	---	---	---	---
1990	75.4	71.8	78.8	---	---	---	---	---	---	---	---	---
1980	73.7	70.0	77.4	---	---	---	---	---	---	---	---	---
1970	70.8	67.1	74.7	---	---	---	---	---	---	---	---	---
1960	69.7	66.6	73.1	---	---	---	---	---	---	---	---	---
1950	68.2	65.6	71.1	---	---	---	---	---	---	---	---	---
1940	62.9	60.8	65.2	---	---	---	---	---	---	---	---	---

--- Data not available.

[1]Includes races and origins not shown separately.

[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

[3]Based on death rates adjusted for misclassification; see Technical Notes.

[4]Life table data for 2001–2015 are based on revised life table methodology; see Technical Notes.

[5]Life expectancies by Hispanic origin were revised using updated adjustment factors to correct for race and Hispanic-origin misclassification.

[6]Life expectancies were revised using updated Medicare data; therefore, data may differ from those previously published; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 5. Death rates by age, and age-adjusted death rates, for the 10 leading causes of death in 2015, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2015

[Rates on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*) and year	All ages[1]	Age group (years)											Age-adjusted rate[3]
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
All causes													
2015	844.0	589.6	24.9	13.2	69.5	116.7	180.1	404.0	875.3	1,796.8	4,579.2	13,673.9	733.1
2014	823.7	588.0	24.0	12.7	65.5	108.4	175.2	404.8	870.3	1,786.3	4,564.2	13,407.9	724.6
2013	821.5	594.7	25.5	13.0	64.8	106.1	172.0	406.1	860.0	1,802.1	4,648.1	13,660.4	731.9
2012	810.2	599.3	26.3	12.6	66.4	105.4	170.7	405.4	854.2	1,802.5	4,674.5	13,678.6	732.8
2011	807.3	600.1	26.3	13.2	67.7	104.7	172.0	409.8	849.4	1,846.2	4,753.0	13,779.3	741.3
2010	799.5	623.4	26.5	12.9	67.7	102.9	170.5	407.1	851.9	1,875.1	4,790.2	13,934.3	747.0
2009	794.5	659.7	27.4	13.8	69.8	104.4	180.0	418.1	856.7	1,888.7	4,820.2	13,660.1	749.6
2008	812.9	678.9	29.3	13.9	74.2	105.1	181.0	419.6	867.1	1,958.4	4,998.1	14,332.4	774.9
2007	804.6	702.5	29.4	15.2	78.8	107.2	186.0	420.3	866.7	1,976.0	4,987.1	14,160.9	775.3
2006	813.1	705.8	29.1	15.2	81.4	109.0	192.0	427.5	881.3	2,031.4	5,096.1	14,426.7	791.8
2005	828.4	710.2	29.9	16.3	80.7	106.8	194.9	431.9	898.5	2,109.7	5,251.8	14,982.4	815.0
2004	818.8	695.9	30.3	16.7	79.7	104.1	194.9	426.8	903.2	2,141.0	5,267.4	14,777.6	813.7
2003	843.9	704.9	31.8	16.9	81.1	105.2	202.6	433.1	937.3	2,235.0	5,451.3	15,401.4	843.5
2002	849.5	709.5	31.4	17.4	80.9	105.1	204.2	431.0	948.7	2,300.3	5,543.8	15,589.5	855.9
2001	848.0	687.0	33.4	17.2	80.2	105.6	203.5	426.7	972.5	2,344.2	5,573.7	15,432.6	858.8
2000	854.0	736.7	32.4	18.0	79.9	101.4	198.9	425.6	992.2	2,399.1	5,666.5	15,524.4	869.0
1999	857.0	736.0	34.2	18.6	79.3	102.2	198.0	418.2	1,005.0	2,457.3	5,714.5	15,554.6	875.6
Diseases of heart (I00–I09,I11,I13,I20–I51)													
2015	197.2	7.3	0.9	0.5	2.3	8.0	25.6	79.3	188.1	389.5	1,071.6	3,986.5	168.5
2014	192.7	8.0	0.9	0.5	2.2	7.7	25.6	80.1	185.8	385.2	1,070.2	3,920.9	167.0
2013	193.3	7.8	1.1	0.4	2.1	7.6	25.6	80.3	184.6	390.3	1,095.1	4,013.9	169.8
2012	191.0	8.5	1.0	0.4	2.2	7.6	25.9	79.7	184.6	388.3	1,103.7	4,046.1	170.5
2011	191.5	7.7	1.0	0.5	2.3	7.9	26.2	80.7	183.2	399.0	1,134.7	4,111.6	173.7
2010	193.6	8.3	1.0	0.5	2.4	7.8	25.8	81.6	186.6	409.2	1,172.0	4,285.2	179.1
2009	195.4	9.6	0.9	0.5	2.4	7.8	26.7	82.3	190.0	422.8	1,210.8	4,316.9	182.8
2008	202.8	9.6	1.2	0.6	2.5	8.1	26.9	85.2	195.3	441.4	1,271.7	4,598.4	192.1
2007	204.5	10.2	1.1	0.6	2.5	8.1	27.7	85.2	197.8	454.8	1,308.6	4,668.1	196.1
2006	211.7	8.6	1.0	0.6	2.5	8.4	28.5	88.0	205.1	483.0	1,378.0	4,877.6	205.5
2005	220.7	8.9	0.9	0.6	2.6	8.3	29.2	89.7	212.8	512.3	1,458.5	5,188.3	216.8
2004	222.8	10.5	1.2	0.6	2.5	8.1	29.5	90.2	217.1	535.7	1,504.1	5,233.8	221.6
2003	236.1	11.0	1.2	0.6	2.7	8.3	30.8	92.4	232.3	579.8	1,607.7	5,570.7	236.3
2002	242.3	12.7	1.1	0.6	2.5	8.0	30.7	93.9	240.5	612.0	1,673.2	5,726.3	244.6
2001	245.7	11.9	1.5	0.7	2.5	8.0	29.6	92.4	248.9	632.6	1,723.0	5,784.1	249.5
2000	252.6	13.0	1.2	0.7	2.6	7.4	29.2	94.2	261.2	665.6	1,780.3	5,926.1	257.6
1999	259.9	13.8	1.2	0.7	2.8	7.6	30.2	95.7	269.9	701.7	1,849.9	6,063.0	266.5
Malignant neoplasms (C00–C97)													
2015	185.4	1.3	2.2	2.1	3.4	8.4	26.9	99.7	284.1	594.3	1,100.8	1,628.6	158.5
2014	185.6	1.3	2.0	2.1	3.6	8.3	27.8	103.2	287.6	603.1	1,125.9	1,632.9	161.2
2013	185.0	1.6	2.1	2.2	3.4	8.6	28.1	105.5	288.2	616.9	1,139.4	1,635.4	163.2
2012	185.6	1.6	2.4	2.2	3.6	8.7	28.0	108.5	293.2	632.2	1,161.7	1,658.9	166.5
2011	185.1	1.8	2.2	2.1	3.7	8.4	28.8	109.3	295.8	647.6	1,179.1	1,676.2	169.0
2010	186.2	1.6	2.1	2.2	3.7	8.8	28.8	111.6	300.1	666.1	1,202.2	1,729.5	172.8
2009	185.0	1.8	2.2	2.2	3.8	9.0	30.2	112.8	301.7	668.2	1,213.0	1,699.3	173.5
2008	186.0	1.7	2.4	2.2	3.8	8.8	30.1	113.4	304.7	688.4	1,230.9	1,724.6	176.4
2007	186.9	1.7	2.3	2.4	3.8	8.7	31.0	114.2	311.4	702.9	1,250.1	1,739.4	179.3
2006	187.6	1.9	2.4	2.2	3.8	9.3	32.2	116.3	317.7	716.3	1,259.2	1,748.3	181.8
2005	189.3	1.9	2.4	2.5	4.0	9.2	33.5	118.6	323.9	733.2	1,272.8	1,778.2	185.1
2004	189.2	1.8	2.5	2.5	4.1	9.3	33.6	119.0	330.8	746.8	1,278.6	1,767.4	186.8
2003	192.0	1.9	2.5	2.6	4.0	9.5	35.1	122.1	341.6	763.5	1,299.7	1,792.3	190.9
2002	193.7	1.9	2.6	2.6	4.2	9.8	36.0	124.1	349.7	787.2	1,308.8	1,812.4	194.3
2001	194.3	1.6	2.7	2.4	4.2	10.1	36.8	125.8	359.4	799.7	1,313.7	1,802.9	196.5
2000	196.5	2.4	2.7	2.5	4.4	9.8	36.6	127.5	366.7	816.3	1,335.6	1,819.4	199.6
1999	197.0	1.8	2.7	2.5	4.5	10.0	37.1	127.6	374.6	827.1	1,331.5	1,805.8	200.8

See footnotes at end of table.

Table 5. Death rates by age, and age-adjusted death rates, for the 10 leading causes of death in 2015, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2015—Con.

[Rates on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*) and year	All ages[1]	Age group (years)											Age-adjusted rate[3]
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Chronic lower respiratory diseases (J40–J47)													
2015	48.2	0.7	0.3	0.4	0.5	0.7	1.7	10.1	42.7	136.6	357.9	705.1	41.6
2014	46.1	*	0.3	0.3	0.4	0.8	1.9	10.1	41.2	134.9	349.0	670.5	40.5
2013	47.2	0.6	0.4	0.4	0.4	0.7	1.9	10.6	40.5	141.2	367.0	699.3	42.1
2012	45.7	0.5	0.3	0.3	0.3	0.7	1.8	10.2	39.4	140.0	364.0	687.8	41.5
2011	45.9	0.8	0.3	0.3	0.4	0.6	1.8	10.4	39.5	144.3	374.9	697.9	42.5
2010	44.7	0.9	0.3	0.3	0.3	0.7	1.7	9.9	39.0	146.3	369.9	690.7	42.2
2009	44.8	0.7	0.4	0.3	0.4	0.7	1.8	10.4	40.0	147.5	376.4	684.9	42.7
2008	46.4	0.8	0.3	0.3	0.4	0.6	1.9	9.9	41.1	155.9	395.4	722.7	44.7
2007	42.5	1.0	0.4	0.3	0.3	0.7	1.9	9.5	38.6	145.5	367.1	652.0	41.4
2006	41.8	0.7	0.3	0.3	0.4	0.6	1.9	9.1	38.8	147.0	362.0	641.3	41.0
2005	44.3	0.8	0.4	0.3	0.3	0.7	2.0	9.4	41.6	158.4	385.0	691.9	43.9
2004	41.7	0.9	0.3	0.3	0.4	0.6	2.0	8.4	40.1	152.1	366.2	643.2	41.6
2003	43.6	0.8	0.4	0.3	0.5	0.7	2.2	8.7	43.1	161.7	382.2	670.2	43.7
2002	43.4	1.0	0.4	0.3	0.5	0.8	2.3	8.7	42.2	162.0	385.8	670.3	43.9
2001	43.2	1.0	0.3	0.3	0.4	0.7	2.2	8.4	44.5	167.3	379.3	658.3	43.9
2000	43.4	0.9	0.3	0.3	0.5	0.7	2.1	8.6	44.2	169.4	386.1	648.6	44.2
1999	44.5	0.9	0.4	0.3	0.5	0.8	2.0	8.5	47.5	177.2	397.8	646.0	45.4
Accidents (unintentional injuries) (V01–X59,Y85–Y86)													
2015	45.6	32.5	7.8	3.7	28.5	44.8	43.9	49.8	47.7	47.0	111.5	364.5	43.2
2014	42.6	29.4	7.6	3.6	26.8	39.8	39.6	47.4	44.9	45.1	108.7	349.1	40.5
2013	41.3	29.3	8.3	3.7	26.4	37.8	38.0	46.5	43.4	43.5	107.4	340.0	39.4
2012	40.7	29.6	8.4	3.8	27.1	37.5	37.1	46.1	41.0	44.0	107.8	336.9	39.1
2011	40.6	29.1	8.5	4.0	28.2	37.1	37.5	46.4	39.8	44.5	107.0	333.8	39.1
2010	39.1	28.1	8.6	4.0	28.3	35.5	36.0	43.7	38.4	43.3	106.1	328.4	38.0
2009	38.5	29.5	9.0	4.1	28.6	34.5	36.4	44.5	36.5	42.1	103.5	310.9	37.5
2008	40.1	31.8	9.1	4.6	32.5	36.3	38.1	45.8	37.4	43.9	105.7	318.3	39.2
2007	41.1	31.0	9.9	5.4	36.8	37.7	39.6	46.2	36.8	44.4	105.0	313.6	40.4
2006	40.8	28.4	10.1	5.6	37.9	38.0	40.5	45.5	35.8	43.8	104.7	299.2	40.2
2005	39.9	27.0	10.5	5.9	37.1	35.7	38.9	43.2	35.4	45.7	106.0	303.5	39.5
2004	38.3	26.2	10.4	6.5	36.8	33.2	37.6	40.7	32.9	43.5	103.6	295.8	38.1
2003	37.7	23.8	11.0	6.4	36.9	32.0	38.0	38.8	32.7	43.7	101.6	294.3	37.6
2002	37.1	23.9	10.6	6.6	37.7	31.9	37.4	36.7	31.3	44.0	101.1	289.6	37.1
2001	35.6	24.3	11.2	6.9	35.8	30.0	35.4	33.9	30.5	42.6	100.7	282.2	35.7
2000	34.8	23.1	11.9	7.3	36.0	29.5	34.1	32.6	30.9	41.9	95.1	273.5	34.9
1999	35.1	22.3	12.4	7.6	35.3	29.6	33.8	31.8	30.6	44.6	100.5	282.4	35.3
Cerebrovascular diseases (I60–I69)													
2015	43.7	2.2	0.3	0.2	0.4	1.3	4.4	12.3	29.6	75.5	273.0	975.8	37.6
2014	41.7	2.4	0.2	0.2	0.4	1.3	4.3	12.3	29.3	74.5	265.7	929.7	36.5
2013	40.8	2.7	0.2	0.2	0.3	1.2	4.2	12.4	28.9	74.2	268.9	906.0	36.2
2012	40.9	2.6	0.3	0.2	0.4	1.3	4.3	12.8	28.7	75.7	272.2	931.2	36.9
2011	41.4	3.4	0.3	0.2	0.4	1.3	4.2	12.8	29.4	78.2	285.4	943.7	37.9
2010	41.9	3.3	0.3	0.2	0.4	1.3	4.6	13.1	29.3	81.7	288.3	993.8	39.1
2009	42.0	3.7	0.3	0.2	0.4	1.3	4.6	13.7	29.7	82.8	294.9	992.2	39.6
2008	44.1	3.4	0.4	0.2	0.4	1.3	4.8	13.7	30.6	87.3	313.3	1,071.0	42.1
2007	45.1	3.2	0.3	0.2	0.5	1.3	5.0	14.5	31.7	91.4	320.8	1,110.7	43.5
2006	46.0	3.5	0.3	0.2	0.5	1.3	5.1	14.6	32.9	94.9	333.9	1,131.7	44.8
2005	48.6	3.1	0.4	0.2	0.5	1.4	5.2	15.0	32.7	99.8	358.4	1,239.7	48.0
2004	51.3	3.2	0.3	0.2	0.5	1.4	5.4	14.8	34.0	106.6	385.6	1,331.9	51.2
2003	54.4	2.5	0.3	0.2	0.5	1.5	5.6	15.0	35.5	111.9	409.8	1,446.0	54.6
2002	56.6	3.0	0.3	0.2	0.4	1.4	5.4	15.1	37.1	119.6	430.0	1,520.1	57.2
2001	57.4	2.7	0.4	0.2	0.5	1.5	5.5	15.0	38.3	122.9	443.3	1,532.0	58.4
2000	59.6	3.3	0.3	0.2	0.5	1.5	5.8	16.0	41.0	128.6	461.3	1,589.2	60.9
1999	60.0	2.7	0.3	0.2	0.5	1.4	5.7	15.2	40.6	130.8	469.8	1,614.8	61.6

See footnotes at end of table.

Table 5. Death rates by age, and age-adjusted death rates, for the 10 leading causes of death in 2015, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2015—Con.

[Rates on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*) and year	All ages[1]	Age group (years)											Age-adjusted rate[3]
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Alzheimer's disease (G30)													
2015	34.4	*	*	*	*	*	*	0.2	2.4	22.4	211.9	1,174.2	29.4
2014	29.3	*	*	*	*	*	*	0.2	2.1	19.6	185.6	1,006.8	25.4
2013	26.8	*	*	*	*	*	*	0.2	2.2	18.1	171.6	929.5	23.5
2012	26.6	*	*	*	*	*	*	0.2	2.2	17.9	175.4	936.1	23.8
2011	27.3	*	*	*	*	*	*	0.2	2.2	19.2	183.9	967.1	24.7
2010	27.0	*	*	*	*	*	*	0.3	2.1	19.8	184.5	987.1	25.1
2009	25.8	*	*	*	*	*	*	0.2	2.0	19.4	179.1	945.3	24.2
2008	27.1	*	*	*	*	*	*	0.2	2.2	21.1	192.5	1,002.2	25.8
2007	24.8	*	*	*	*	*	*	0.2	2.2	20.2	175.8	928.7	23.8
2006	24.3	*	*	*	*	*	*	0.2	2.1	19.9	175.0	923.4	23.7
2005	24.2	*	*	*	*	*	*	0.2	2.1	20.2	177.0	935.5	24.0
2004	22.5	*	*	*	*	*	*	0.2	1.8	19.5	168.5	875.3	22.6
2003	21.9	*	*	*	*	*	*	0.2	2.0	20.7	164.1	846.8	22.1
2002	20.5	*	*	*	*	*	*	0.1	1.9	19.6	157.7	790.9	20.8
2001	18.9	*	*	*	*	*	*	0.2	2.1	18.6	147.2	725.4	19.3
2000	17.6	*	*	*	*	*	*	0.2	2.0	18.7	139.6	667.7	18.1
1999	16.0	*	*	*	*	*	*	0.2	1.9	17.4	129.5	601.3	16.5
Diabetes mellitus (E10–E14)													
2015	24.7	*	*	0.1	0.4	1.8	4.9	14.4	34.7	70.6	143.0	267.0	21.3
2014	24.0	*	*	0.1	0.4	1.6	4.9	13.9	33.3	69.0	141.8	268.6	20.9
2013	23.9	*	*	0.1	0.4	1.6	4.8	13.5	33.2	68.5	145.7	279.5	21.2
2012	23.6	*	*	0.1	0.4	1.5	4.6	13.0	32.5	69.7	145.8	285.7	21.2
2011	23.7	*	*	0.1	0.4	1.6	4.5	13.4	33.3	72.0	148.8	289.5	21.6
2010	22.4	*	*	0.1	0.4	1.5	4.4	12.5	32.0	67.6	144.1	285.5	20.8
2009	22.4	*	*	0.1	0.4	1.5	4.5	12.8	32.1	69.6	145.8	282.6	21.0
2008	23.2	*	*	0.1	0.5	1.4	4.4	12.6	33.3	74.7	153.2	298.9	22.0
2007	23.7	*	*	0.1	0.4	1.5	4.6	13.1	34.1	76.7	161.9	302.2	22.8
2006	24.3	*	*	0.1	0.4	1.7	4.8	13.1	35.8	80.6	166.2	310.4	23.6
2005	25.4	*	*	0.1	0.5	1.6	4.7	13.4	36.9	85.7	177.0	338.8	24.9
2004	25.0	*	*	0.1	0.4	1.5	4.6	13.4	36.8	86.2	176.6	328.2	24.7
2003	25.6	*	*	0.1	0.4	1.7	4.6	13.9	38.3	90.0	180.7	335.1	25.5
2002	25.5	*	*	0.1	0.4	1.6	4.8	13.7	37.5	90.9	182.4	337.0	25.6
2001	25.0	*	*	0.1	0.4	1.5	4.3	13.6	38.1	91.0	181.1	328.6	25.4
2000	24.6	*	*	0.1	0.4	1.6	4.3	13.1	37.8	90.7	179.5	319.7	25.0
1999	24.5	*	*	0.1	0.4	1.4	4.3	12.9	38.3	91.8	178.0	317.2	25.0
Influenza and pneumonia (J09–J18)													
2015	17.8	4.4	0.6	0.2	0.4	0.9	1.7	4.7	11.3	29.5	101.6	421.4	15.2
2014	17.3	4.7	0.7	0.2	0.5	1.3	2.8	6.3	13.4	29.8	96.4	385.9	15.1
2013	18.0	4.5	0.6	0.3	0.4	1.0	2.2	5.1	12.2	29.5	103.7	441.0	15.9
2012	16.1	4.0	0.6	0.2	0.3	0.8	1.7	4.1	10.2	26.1	98.2	408.4	14.4
2011	17.3	5.2	0.7	0.3	0.5	1.2	2.1	5.0	11.0	28.9	104.0	439.2	15.7
2010	16.2	4.9	0.6	0.2	0.4	0.9	1.9	4.3	9.9	27.9	102.4	426.2	15.1
2009	17.5	6.3	0.9	0.6	1.0	2.0	3.2	6.5	11.7	29.5	107.0	433.8	16.5
2008	18.5	5.5	0.9	0.2	0.5	0.9	2.1	5.1	10.9	30.5	118.6	512.3	17.6
2007	17.5	5.4	0.7	0.3	0.4	0.8	1.8	4.3	9.5	28.2	113.5	506.7	16.8
2006	18.9	6.5	0.8	0.2	0.4	0.9	1.9	4.6	9.9	31.6	127.3	547.0	18.4
2005	21.3	6.6	0.7	0.3	0.4	0.9	2.1	5.1	11.2	35.1	142.0	644.9	21.0
2004	20.4	6.8	0.8	0.2	0.4	0.8	2.0	4.6	10.8	34.2	139.1	622.8	20.4
2003	22.5	8.1	1.0	0.4	0.5	1.0	2.2	5.2	11.2	36.9	150.8	703.0	22.6
2002	22.8	6.7	0.7	0.2	0.4	0.9	2.2	4.8	11.2	37.2	156.6	732.4	23.2
2001	21.8	7.5	0.7	0.2	0.5	0.9	2.2	4.6	10.8	36.2	148.3	700.1	22.2
2000	23.2	7.6	0.7	0.2	0.5	0.9	2.4	4.7	11.9	39.1	160.3	744.1	23.7
1999	22.8	8.4	0.8	0.2	0.5	0.8	2.4	4.6	11.0	37.2	157.0	751.8	23.5

See footnotes at end of table.

Table 5. Death rates by age, and age-adjusted death rates, for the 10 leading causes of death in 2015, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2015—Con.

[Rates on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*) and year	All ages[1]	Age group (years)											Age-adjusted rate[3]
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19, N25–N27)													
2015	15.5	2.1	*	*	0.1	0.6	1.7	4.9	13.3	35.1	99.7	281.8	13.4
2014	15.1	2.3	*	*	0.2	0.5	1.7	4.7	12.6	34.3	98.6	282.4	13.2
2013	14.9	2.2	*	*	0.1	0.6	1.5	4.6	12.6	33.8	99.0	285.4	13.2
2012	14.5	2.1	*	*	0.2	0.5	1.6	4.7	12.3	33.3	99.9	280.0	13.1
2011	14.6	1.9	*	*	0.2	0.5	1.6	4.4	12.5	34.2	101.4	292.1	13.4
2010	16.3	2.7	*	0.1	0.2	0.6	1.8	4.9	13.9	39.3	115.7	333.8	15.3
2009	16.0	2.8	*	*	0.2	0.7	2.0	5.2	13.5	38.7	115.1	321.4	15.1
2008	15.9	3.5	*	*	0.2	0.6	1.8	5.0	14.1	39.9	113.3	325.6	15.1
2007	15.4	3.5	0.1	0.1	0.2	0.7	1.8	5.1	13.4	39.4	112.4	317.9	14.9
2006	15.2	4.0	*	*	0.2	0.7	1.8	5.2	13.7	38.8	111.0	316.2	14.8
2005	14.9	4.0	*	0.1	0.2	0.7	1.7	4.8	13.5	38.8	110.2	313.1	14.7
2004	14.5	4.3	*	0.1	0.2	0.6	1.8	5.0	13.5	38.1	108.2	306.4	14.5
2003	14.6	4.6	*	0.1	0.2	0.7	1.8	4.9	13.6	39.7	109.3	309.3	14.7
2002	14.2	4.4	*	0.1	0.2	0.7	1.7	4.7	12.9	39.0	108.9	303.4	14.4
2001	13.9	3.3	*	*	0.2	0.6	1.7	4.6	13.1	40.0	104.0	293.8	14.1
2000	13.2	4.3	*	0.1	0.2	0.6	1.6	4.4	12.8	38.0	100.8	277.8	13.5
1999	12.7	4.4	*	0.1	0.2	0.6	1.6	4.0	12.0	37.1	97.6	268.9	13.0
Intentional self-harm (suicide) (*U03, X60–X84,Y87.0)[4]													
2015	13.7	…	…	1.0	12.5	15.7	17.1	20.3	18.9	15.2	17.9	19.4	13.3
2014	13.4	…	…	1.0	11.6	15.1	16.6	20.2	18.8	15.6	17.5	19.3	13.0
2013	13.0	…	…	1.0	11.1	14.8	16.2	19.7	18.1	15.0	17.1	18.6	12.6
2012	12.9	…	…	0.8	11.1	14.7	16.7	20.0	18.0	14.0	16.8	17.8	12.6
2011	12.7	…	…	0.7	11.0	14.6	16.2	19.8	17.1	14.1	16.5	16.9	12.3
2010	12.4	…	…	0.7	10.5	14.0	16.0	19.6	17.5	13.7	15.7	17.6	12.1
2009	12.0	…	…	0.6	10.0	13.1	16.1	19.2	16.4	13.7	15.8	16.4	11.8
2008	11.8	…	…	0.5	9.9	13.2	15.9	18.6	16.0	13.6	16.1	16.4	11.6
2007	11.5	…	…	0.5	9.6	13.3	15.7	17.7	15.3	12.4	16.2	17.0	11.3
2006	11.2	…	…	0.5	9.8	12.7	15.2	17.2	14.4	12.4	15.8	17.3	11.0
2005	11.0	…	…	0.7	9.9	12.7	15.1	16.5	13.7	12.4	16.8	18.3	10.9
2004	11.1	…	…	0.7	10.3	12.9	15.2	16.6	13.7	12.2	16.3	17.6	11.0
2003	10.9	…	…	0.6	9.6	12.9	15.0	15.9	13.7	12.6	16.4	17.9	10.8
2002	11.0	…	…	0.6	9.8	12.8	15.3	15.8	13.5	13.4	17.7	18.9	10.9
2001[5]	10.7	…	…	0.7	9.9	12.8	14.7	15.1	13.2	13.2	17.4	17.8	10.7
2000	10.4	…	…	0.7	10.2	12.0	14.5	14.4	12.1	12.5	17.6	19.6	10.4
1999	10.5	…	…	0.6	10.1	12.7	14.3	13.9	12.2	13.4	18.1	19.3	10.5
Drug-induced causes[6]													
2015	17.2	0.7	0.4	0.1	10.0	28.0	29.6	31.9	23.3	8.1	4.4	5.6	17.2
2014	15.6	0.6	0.3	0.1	8.9	24.0	26.2	29.8	21.7	7.6	4.4	5.0	15.5
2013	14.7	0.8	0.3	0.1	8.6	21.7	24.1	29.0	20.6	7.1	4.4	5.3	14.6
2012	14.0	0.8	0.2	0.1	8.3	20.9	23.1	28.3	17.9	6.5	4.0	5.1	13.8
2011	14.0	0.6	0.2	0.1	8.9	20.9	23.4	28.2	17.1	6.0	4.0	4.9	13.9
2010	13.1	0.6	0.3	0.2	8.4	19.2	21.7	26.5	16.2	5.2	4.0	5.5	12.9
2009	12.8	0.8	0.2	0.1	8.0	17.8	21.5	26.9	14.9	5.4	4.5	5.1	12.6
2008	12.7	0.5	0.3	0.1	8.3	17.4	22.2	26.8	14.0	5.2	4.0	5.0	12.6

See footnotes at end of table.

Table 5. Death rates by age, and age-adjusted death rates, for the 10 leading causes of death in 2015, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2015—Con.

[Rates on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*) and year	All ages[1]	Age group (years)											Age-adjusted rate[3]
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Drug-induced causes[6]—Con.													
2007	12.7	0.8	0.3	0.2	8.5	17.5	22.6	26.8	13.4	4.6	3.9	5.2	12.6
2006	12.9	1.1	0.2	0.1	8.5	17.2	23.5	26.7	12.1	5.2	6.0	8.8	12.8
2005	11.3	0.9	0.2	0.1	7.3	14.6	21.5	23.6	10.6	4.7	5.4	8.3	11.3
2004	10.5	0.7	0.2	0.2	6.9	12.9	21.1	21.7	9.0	4.2	4.8	6.7	10.5
2003	9.9	0.6	0.2	0.1	6.3	12.3	20.7	20.0	8.0	4.1	4.2	6.3	9.9
2002	9.1	0.7	0.2	0.1	5.4	11.3	19.8	18.0	6.8	3.6	3.8	6.0	9.1
2001	7.6	0.5	0.2	0.1	4.5	9.5	17.0	14.7	5.4	3.0	3.5	5.2	7.6
2000	7.0	*	*	0.1	4.0	8.8	16.0	13.2	4.9	2.6	3.5	5.7	7.0
1999	6.9	0.6	0.2	0.1	3.5	8.9	15.7	12.6	4.9	3.0	3.8	4.8	6.8
Alcohol-induced causes[6]													
2015	10.3	*	*	*	0.4	3.2	8.7	21.6	28.2	19.1	11.2	5.8	9.1
2014	9.6	*	*	*	0.3	2.8	8.0	20.4	26.8	17.6	10.5	5.6	8.5
2013	9.2	*	*	*	0.3	2.5	7.7	20.1	25.3	16.6	10.3	4.9	8.2
2012	8.8	*	*	*	0.4	2.4	7.4	20.0	24.1	15.8	10.3	5.0	8.0
2011	8.6	*	*	*	0.4	2.1	7.6	19.8	22.7	15.2	9.6	5.1	7.7
2010	8.3	*	*	*	0.3	2.2	7.5	19.1	21.9	15.8	9.6	5.3	7.6
2009	8.0	*	*	*	0.4	1.8	7.6	18.7	20.8	15.1	9.2	4.8	7.4
2008	8.0	*	*	*	0.4	2.0	7.6	18.6	20.7	15.3	9.4	5.2	7.4
2007	7.7	*	*	*	0.4	1.9	7.3	18.2	19.9	15.2	9.6	5.0	7.2
2006	7.4	*	*	*	0.3	1.6	7.5	17.5	19.2	14.5	9.7	5.3	7.0
2005	7.3	*	*	*	0.4	1.4	7.5	17.6	19.4	14.9	9.2	5.0	7.0
2004	7.2	*	*	*	0.3	1.6	7.7	17.3	18.6	15.5	9.2	4.6	7.0
2003	7.1	*	*	*	0.3	1.5	8.1	17.3	18.5	15.0	9.2	4.3	7.0
2002	7.0	*	*	*	0.3	1.5	8.1	16.9	18.3	15.4	9.3	4.6	6.9
2001	7.1	*	*	*	0.3	1.6	8.3	17.1	18.3	15.5	9.6	5.1	7.0
2000	7.0	*	*	*	0.2	1.6	8.5	16.3	18.7	15.8	9.9	5.4	7.0
1999	7.0	*	*	*	0.3	1.6	8.5	16.4	18.7	15.9	10.6	5.5	7.1
Injury by firearms[6]													
2015	11.3	*	0.5	0.9	15.7	16.8	13.1	12.4	11.7	11.3	14.5	14.5	11.1
2014	10.5	*	0.4	0.9	14.0	14.7	12.1	12.2	11.4	11.5	13.9	15.0	10.3
2013	10.6	*	0.4	0.8	14.1	15.3	12.3	12.3	11.5	11.3	14.1	13.9	10.4
2012	10.7	*	0.4	0.8	14.7	15.3	12.4	12.4	11.6	10.8	14.1	13.6	10.5
2011	10.4	*	0.5	0.8	14.4	15.0	11.7	12.2	11.0	10.9	13.7	13.1	10.2
2010	10.3	*	0.4	0.7	14.2	15.0	11.7	12.0	11.1	10.7	12.7	13.2	10.1
2009	10.2	*	0.4	0.7	14.4	14.5	11.9	11.8	10.8	10.9	13.3	12.5	10.1
2008	10.4	*	0.5	0.7	15.4	15.4	11.8	11.5	10.8	10.7	13.2	12.5	10.3
2007	10.4	*	0.4	0.8	16.0	15.9	12.0	11.1	10.1	9.8	13.1	12.7	10.3
2006	10.4	*	0.4	0.9	16.7	15.7	11.6	11.2	9.7	9.9	12.9	12.5	10.3
2005	10.4	*	0.4	0.8	16.1	16.1	11.7	11.2	9.7	10.2	13.6	13.0	10.3
2004	10.1	*	0.3	0.7	15.6	15.3	11.4	11.0	9.8	10.1	13.3	12.7	10.0
2003	10.4	*	0.3	0.8	16.5	15.8	11.6	11.1	10.0	10.3	13.4	13.2	10.3
2002	10.5	*	0.4	0.8	16.6	15.6	12.2	10.8	10.2	10.8	14.4	13.2	10.5
2001	10.4	*	0.5	0.8	16.6	15.5	11.7	10.5	10.1	10.9	14.3	13.1	10.3
2000	10.2	*	0.3	0.9	16.8	14.5	11.9	10.5	9.4	10.6	13.9	14.2	10.2
1999	10.3	*	0.4	1.0	17.6	14.9	11.6	10.2	9.7	11.0	14.2	13.5	10.3

* Figure does not meet standards of reliability or precision; see Technical Notes.
… Category not applicable.
[1]Data for age not stated included in "All ages" but not distributed among age groups.
[2]Death rates for "Under 1 year" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.
[3]For method of computation, see Technical Notes.
[4]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, Tenth Revision* (ICD–10); see Technical Notes.
[5]Data include September 11, 2001-related deaths for which death certificates were filed as of October 24, 2002; see Technical Notes for National Vital Statistics Reports vol 52 no 3, "Deaths: Final Data for 2001."
[6]For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 6. Number of deaths from selected causes, by age: United States, 2015

[Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	All ages	Age group (years)											
		Under 1 year	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated
All causes	2,712,630	23,455	3,965	5,411	30,494	51,517	73,088	174,494	357,785	495,016	637,566	859,701	138
Enterocolitis due to *Clostridium difficile* (A04.7)	7,410	2	2	3	8	22	67	214	650	1,272	2,256	2,913	1
Septicemia (A40–A41)	40,773	180	54	64	130	379	829	2,542	5,774	8,655	10,481	11,681	4
Viral hepatitis (B15–B19)	7,461	1	–	1	4	47	248	1,496	3,559	1,464	478	163	–
Human immunodeficiency virus (HIV) disease (B20–B24)	6,465	2	2	1	100	529	1,055	2,027	1,824	710	184	31	–
Malignant neoplasms (C00–C97)	595,930	53	354	865	1,469	3,704	10,909	43,054	116,122	163,728	153,268	102,393	11
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	9,754	–	–	1	19	66	174	1,009	2,662	2,657	1,869	1,297	–
Malignant neoplasm of esophagus (C15)	15,212	–	–	–	4	32	230	1,239	3,813	4,734	3,475	1,684	1
Malignant neoplasm of stomach (C16)	11,331	–	–	–	26	129	439	1,086	2,148	2,754	2,851	1,897	1
Malignant neoplasms of colon, rectum and anus (C18–C21)	53,176	–	–	–	41	368	1,407	4,972	10,225	12,586	12,572	11,004	1
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	25,761	2	14	19	31	100	335	2,090	7,979	7,289	5,265	2,636	1
Malignant neoplasm of pancreas (C25)	41,615	–	–	–	14	62	446	2,704	8,307	12,438	11,030	6,614	–
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	153,819	–	2	5	26	133	1,015	8,837	31,413	49,855	42,655	19,874	4
Malignant melanoma of skin (C43)	8,885	–	3	1	18	129	390	837	1,678	2,181	2,105	1,543	–
Malignant neoplasm of breast (C50)	41,987	–	–	–	9	390	1,842	5,220	9,255	9,931	8,156	7,183	1
Malignant neoplasm of cervix uteri (C53)	4,175	–	–	–	10	210	561	906	1,014	779	456	239	–
Malignant neoplasm of ovary (C56)	13,920	–	–	4	29	89	302	1,272	2,959	3,902	3,385	1,978	–
Malignant neoplasm of prostate (C61)	28,848	–	–	–	–	4	18	394	2,715	6,487	9,611	9,619	–
Malignant neoplasms of kidney and renal pelvis (C64–C65)	14,448	5	11	20	28	65	227	1,068	3,077	4,072	3,537	2,338	–
Malignant neoplasm of bladder (C67)	16,254	–	–	–	2	15	68	497	1,817	3,620	5,147	5,088	–
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	16,268	9	94	327	230	405	839	1,966	3,748	4,355	2,963	1,332	–
Non-Hodgkin's lymphoma (C82–C85)	20,154	–	3	32	86	186	340	1,032	2,795	4,899	6,189	4,592	–
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	12,696	–	–	–	1	10	116	640	1,912	3,577	4,056	2,384	–
Leukemia (C91–C95)	22,665	22	115	206	335	419	495	1,180	2,795	5,338	6,724	5,036	–
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	16,277	47	34	72	83	147	261	675	1,619	3,156	4,837	5,346	–
Anemias (D50–D64)	5,250	17	25	33	84	146	176	257	476	793	1,132	2,111	–
Diabetes mellitus (E10–E14)	79,535	3	5	23	196	798	1,986	6,212	14,166	19,453	19,904	16,785	4
Nutritional deficiencies (E40–E64)	5,222	9	4	1	10	25	44	137	355	697	1,211	2,729	–
Obesity (E66)	7,430	–	1	4	75	397	887	1,586	1,951	1,568	742	219	–
Parkinson's disease (G20–G21)	27,972	–	–	–	3	–	6	66	628	3,813	11,473	11,983	–

See footnotes at end of table.

Table 6. Number of deaths from selected causes, by age: United States, 2015—Con.

[Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	All ages	Age group (years)											
		Under 1 year	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated
Alzheimer's disease (G30)	110,561	–	–	–	–	–	11	87	968	6,167	29,503	73,825	–
Major cardiovascular diseases (I00–I78)	832,024	404	196	300	1,226	4,383	13,104	42,106	95,347	137,805	201,515	335,601	37
Diseases of heart (I00–I09,I11,I13,I20–I51)	633,842	292	147	210	997	3,522	10,387	34,248	76,872	107,303	149,199	250,636	29
Essential hypertension and hypertensive renal disease (I10,I12,I15)	32,200	3	4	–	15	121	470	1,477	3,595	4,979	7,533	14,003	–
Cerebrovascular diseases (I60–I69)	140,323	89	42	84	166	567	1,788	5,307	12,116	20,793	38,012	61,351	8
Atherosclerosis (I70)	6,088	5	–	–	1	7	22	96	364	741	1,506	3,346	–
Aortic aneurysm and dissection (I71)	9,988	1	–	4	33	124	322	620	1,322	2,122	2,769	2,671	–
Influenza and pneumonia (J09–J18)	57,062	174	88	83	184	397	708	2,050	4,601	8,131	14,149	26,494	3
Chronic lower respiratory diseases (J40–J47)	155,041	26	40	173	202	288	702	4,345	17,457	37,642	49,832	44,330	4
Pneumonitis due to solids and liquids (J69)	19,803	8	10	6	43	87	171	536	1,468	2,586	5,152	9,736	–
Chronic liver disease and cirrhosis (K70,K73–K74)	40,326	3	2	1	28	844	2,861	8,874	13,278	8,409	4,446	1,577	3
Alcoholic liver disease (K70)	21,028	–	–	–	19	681	2,147	5,997	7,574	3,413	1,012	183	2
Cholelithiasis and other disorders of gallbladder (K80–K82)	3,766	–	–	–	5	21	49	141	311	661	1,046	1,532	–
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	49,959	85	16	17	57	262	686	2,124	5,452	9,662	13,881	17,715	2
Pregnancy, childbirth and the puerperium (O00–O99)	1,140	…	…	2	161	424	310	240	1	1	–	–	1
Certain conditions originating in the perinatal period (P00–P96)	11,715	11,613	50	21	11	3	2	8	5	1	–	1	–
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	10,017	4,825	435	337	386	443	483	781	1,085	542	341	358	1
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	32,042	2,819	252	115	552	1,125	1,299	2,152	2,957	3,518	4,924	12,301	28
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	146,571	1,291	1,235	1,518	12,514	19,795	17,818	21,499	19,488	12,961	15,518	22,916	18
Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14, V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8, V88.0–V88.8,V89.0,V89.2)	37,757	70	416	860	6,977	6,504	4,849	5,539	5,209	3,524	2,437	1,367	5
Falls (W00–W19)	33,381	4	30	25	217	324	492	1,298	2,504	4,091	8,668	15,727	1
Accidental discharge of firearms (W32–W34)	489	1	25	22	121	79	59	57	55	45	18	7	–
Accidental drowning and submersion (W65–W74)	3,602	30	390	216	504	445	374	450	491	343	267	89	3
Accidental hanging, strangulation, and suffocation (W75–W84)	6,914	1,125	131	57	97	181	240	469	777	923	1,231	1,683	–
Accidental exposure to smoke, fire and flames (X00–X09)	2,646	22	96	113	78	137	148	364	558	494	411	224	1
Accidental poisoning and exposure to noxious substances (X40–X49)	47,478	9	29	53	3,920	11,231	10,580	11,670	7,782	1,596	386	216	6
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)[1]	44,193	…	…	413	5,491	6,947	6,936	8,751	7,739	4,201	2,489	1,222	4
Intentional self-harm (suicide) by poisoning (X60–X69)	6,816	…	…	23	409	769	1,181	1,835	1,593	603	250	152	1
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	11,855	…	…	237	2,119	2,504	2,219	2,333	1,535	541	232	135	–
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	22,018	…	…	140	2,461	3,118	2,952	3,882	3,951	2,779	1,872	860	3

See footnotes at end of table.

Table 6. Number of deaths from selected causes, by age: United States, 2015—Con.

[Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	All ages	Age group (years)											
		Under 1 year	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	Age not stated
Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)[1]	17,793	263	369	298	4,733	4,863	2,895	2,106	1,309	550	294	109	4
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)[1]	12,979	8	50	190	4,140	3,996	2,197	1,299	681	258	119	40	1
Legal intervention (Y35,Y89.0)	530	–	–	–	88	163	109	101	53	10	4	2	–
Complications of medical and surgical care (Y40–Y84,Y88)	2,686	12	18	17	40	65	113	240	460	652	607	462	–
Drug-induced deaths[2]	55,403	29	56	60	4,401	12,379	12,013	13,760	9,511	2,230	606	353	5
Alcohol-induced deaths[2]	33,171	–	–	3	157	1,418	3,543	9,320	11,545	5,255	1,557	366	7
Injury by firearms[2]	36,252	9	78	356	6,883	7,406	5,337	5,361	4,766	3,114	2,024	914	4

– Quantity zero.

… Category not applicable.

[1]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, Tenth Revision* (ICD–10); see Technical Notes.

[2]Included in selected categories above. For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 7. Death rates for selected causes, by age: United States, 2015

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	All ages[1]	Age group (years)										
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
All causes	844.0	589.6	24.9	13.2	69.5	116.7	180.1	404.0	875.3	1,796.8	4,579.2	13,673.9
Enterocolitis due to *Clostridium difficile* (A04.7)	2.3	*	*	*	*	0.0	0.2	0.5	1.6	4.6	16.2	46.3
Septicemia (A40–A41)	12.7	4.5	0.3	0.2	0.3	0.9	2.0	5.9	14.1	31.4	75.3	185.8
Viral hepatitis (B15–B19)	2.3	*	*	*	*	0.1	0.6	3.5	8.7	5.3	3.4	2.6
Human immunodeficiency virus (HIV) disease (B20–B24)	2.0	*	*	*	0.2	1.2	2.6	4.7	4.5	2.6	1.3	0.5
Malignant neoplasms (C00–C97)	185.4	1.3	2.2	2.1	3.4	8.4	26.9	99.7	284.1	594.3	1,100.8	1,628.6
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	3.0	*	*	*	*	0.1	0.4	2.3	6.5	9.6	13.4	20.6
Malignant neoplasm of esophagus (C15)	4.7	*	*	*	*	0.1	0.6	2.9	9.3	17.2	25.0	26.8
Malignant neoplasm of stomach (C16)	3.5	*	*	*	0.1	0.3	1.1	2.5	5.3	10.0	20.5	30.2
Malignant neoplasms of colon, rectum and anus (C18–C21)	16.5	*	*	*	0.1	0.8	3.5	11.5	25.0	45.7	90.3	175.0
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	8.0	*	*	*	0.1	0.2	0.8	4.8	19.5	26.5	37.8	41.9
Malignant neoplasm of pancreas (C25)	12.9	*	*	*	*	0.1	1.1	6.3	20.3	45.1	79.2	105.2
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	47.9	*	*	*	0.1	0.3	2.5	20.5	76.8	181.0	306.4	316.1
Malignant melanoma of skin (C43)	2.8	*	*	*	*	0.3	1.0	1.9	4.1	7.9	15.1	24.5
Malignant neoplasm of breast (C50)	13.1	*	*	*	*	0.9	4.5	12.1	22.6	36.0	58.6	114.2
Malignant neoplasm of cervix uteri (C53)	1.3	*	*	*	*	0.5	1.4	2.1	2.5	2.8	3.3	3.8
Malignant neoplasm of ovary (C56)	4.3	*	*	*	0.1	0.2	0.7	2.9	7.2	14.2	24.3	31.5
Malignant neoplasm of prostate (C61)	9.0	*	*	*	*	*	*	0.9	6.6	23.5	69.0	153.0
Malignant neoplasms of kidney and renal pelvis (C64–C65)	4.5	*	*	0.0	0.1	0.1	0.6	2.5	7.5	14.8	25.4	37.2
Malignant neoplasm of bladder (C67)	5.1	*	*	*	*	*	0.2	1.2	4.4	13.1	37.0	80.9
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	5.1	*	0.6	0.8	0.5	0.9	2.1	4.6	9.2	15.8	21.3	21.2
Non-Hodgkin's lymphoma (C82–C85)	6.3	*	*	0.1	0.2	0.4	0.8	2.4	6.8	17.8	44.5	73.0
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.9	*	*	*	*	*	0.3	1.5	4.7	13.0	29.1	37.9
Leukemia (C91–C95)	7.1	0.6	0.7	0.5	0.8	0.9	1.2	2.7	6.8	19.4	48.3	80.1
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	5.1	1.2	0.2	0.2	0.2	0.3	0.6	1.6	4.0	11.5	34.7	85.0
Anemias (D50–D64)	1.6	*	0.2	0.1	0.2	0.3	0.4	0.6	1.2	2.9	8.1	33.6
Diabetes mellitus (E10–E14)	24.7	*	*	0.1	0.4	1.8	4.9	14.4	34.7	70.6	143.0	267.0
Nutritional deficiencies (E40–E64)	1.6	*	*	*	*	0.1	0.1	0.3	0.9	2.5	8.7	43.4
Obesity (E66)	2.3	*	*	*	0.2	0.9	2.2	3.7	4.8	5.7	5.3	3.5
Parkinson's disease (G20–G21)	8.7	*	*	*	*	*	*	0.2	1.5	13.8	82.4	190.6
Alzheimer's disease (G30)	34.4	*	*	*	*	*	*	0.2	2.4	22.4	211.9	1,174.2
Major cardiovascular diseases (I00–I78)	258.9	10.2	1.2	0.7	2.8	9.9	32.3	97.5	233.2	500.2	1,447.3	5,337.9
Diseases of heart (I00–I09,I11,I13,I20–I51)	197.2	7.3	0.9	0.5	2.3	8.0	25.6	79.3	188.1	389.5	1,071.6	3,986.5
Essential hypertension and hypertensive renal disease (I10,I12,I15)	10.0	*	*	*	*	0.3	1.2	3.4	8.8	18.1	54.1	222.7
Cerebrovascular diseases (I60–I69)	43.7	2.2	0.3	0.2	0.4	1.3	4.4	12.3	29.6	75.5	273.0	975.8
Atherosclerosis (I70)	1.9	*	*	*	*	*	0.1	0.2	0.9	2.7	10.8	53.2
Aortic aneurysm and dissection (I71)	3.1	*	*	*	0.1	0.3	0.8	1.4	3.2	7.7	19.9	42.5

See footnotes at end of table.

Table 7. Death rates for selected causes, by age: United States, 2015—Con.

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	All ages[1]	Age group (years)										
		Under 1 year[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
Influenza and pneumonia (J09–J18)	17.8	4.4	0.6	0.2	0.4	0.9	1.7	4.7	11.3	29.5	101.6	421.4
Chronic lower respiratory diseases (J40–J47)	48.2	0.7	0.3	0.4	0.5	0.7	1.7	10.1	42.7	136.6	357.9	705.1
Pneumonitis due to solids and liquids (J69)	6.2	*	*	*	0.1	0.2	0.4	1.2	3.6	9.4	37.0	154.9
Chronic liver disease and cirrhosis (K70,K73–K74)	12.5	*	*	*	0.1	1.9	7.0	20.5	32.5	30.5	31.9	25.1
Alcoholic liver disease (K70)	6.5	*	*	*	*	1.5	5.3	13.9	18.5	12.4	7.3	2.9
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.2	*	*	*	*	0.0	0.1	0.3	0.8	2.4	7.5	24.4
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	15.5	2.1	*	*	0.1	0.6	1.7	4.9	13.3	35.1	99.7	281.8
Pregnancy, childbirth and the puerperium O00–O99)	0.4	…	…	*	0.4	1.0	0.8	0.6	*	*	*	*
Certain conditions originating in the perinatal period (P00–P96)	3.6	291.9	0.3	0.1	*	*	*	*	*	*	*	*
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.1	121.3	2.7	0.8	0.9	1.0	1.2	1.8	2.7	2.0	2.4	5.7
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	10.0	70.9	1.6	0.3	1.3	2.5	3.2	5.0	7.2	12.8	35.4	195.7
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	45.6	32.5	7.8	3.7	28.5	44.8	43.9	49.8	47.7	47.0	111.5	364.5
Motor vehicle accidents (V02–V04,V09.0,V09.2,V12–V14, V19.0–V19.2,V19.4–V19.6,V20–V79,V80.3–V80.5 V81.0–V81.1,V82.0–V82.1,V83–V86,V87.0–V87.8, V88.0–V88.8,V89.0,V89.2)	11.7	1.8	2.6	2.1	15.9	14.7	11.9	12.8	12.7	12.8	17.5	21.7
Falls (W00-W19)	10.4	*	0.2	0.1	0.5	0.7	1.2	3.0	6.1	14.8	62.3	250.1
Accidental discharge of firearms (W32–W34)	0.2	*	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.2	*	*
Accidental drowning and submersion (W65–W74)	1.1	0.8	2.4	0.5	1.1	1.0	0.9	1.0	1.2	1.2	1.9	1.4
Accidental hanging, strangulation, and suffocation (W75–W84)	2.2	28.3	0.8	0.1	0.2	0.4	0.6	1.1	1.9	3.4	8.8	26.8
Accidental exposure to smoke, fire and flames (X00–X09)	0.8	0.6	0.6	0.3	0.2	0.3	0.4	0.8	1.4	1.8	3.0	3.6
Accidental poisoning and exposure to noxious substances (X40–X49)	14.8	*	0.2	0.1	8.9	25.4	26.1	27.0	19.0	5.8	2.8	3.4
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)[3]	13.7	…	…	1.0	12.5	15.7	17.1	20.3	18.9	15.2	17.9	19.4
Intentional self-harm (suicide) by poisoning (X60–X69)	2.1	…	…	0.1	0.9	1.7	2.9	4.2	3.9	2.2	1.8	2.4
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	3.7	…	…	0.6	4.8	5.7	5.5	5.4	3.8	2.0	1.7	2.1
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	6.9	…	…	0.3	5.6	7.1	7.3	9.0	9.7	10.1	13.4	13.7
Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)[3]	5.5	6.6	2.3	0.7	10.8	11.0	7.1	4.9	3.2	2.0	2.1	1.7
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)[3]	4.0	*	0.3	0.5	9.4	9.1	5.4	3.0	1.7	0.9	0.9	0.6
Legal intervention (Y35,Y89.0)	0.2	*	*	*	0.2	0.4	0.3	0.2	0.1	*	*	*
Complications of medical and surgical care (Y40–Y84,Y88)	0.8	*	*	*	0.1	0.1	0.3	0.6	1.1	2.4	4.4	7.3
Drug-induced deaths[4]	17.2	0.7	0.4	0.1	10.0	28.0	29.6	31.9	23.3	8.1	4.4	5.6
Alcohol-induced deaths[4]	10.3	*	*	*	0.4	3.2	8.7	21.6	28.2	19.1	11.2	5.8
Injury by firearms[4]	11.3	*	0.5	0.9	15.7	16.8	13.1	12.4	11.7	11.3	14.5	14.5

* Figure does not meet standards of reliability or precision; see Technical Notes.
0.0 Quantity more than zero but less than 0.05.
… Category not applicable.
[1]Data for age not stated included in "All ages" but not distributed among age groups.
[2]Death rates for "Under 1 year" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.
[3]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, Tenth Revision* (ICD–10); see Technical Notes.
[4]Included in selected categories above. For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 8. Number of deaths from selected causes, by race and Hispanic origin, and sex: United States, 2015

[Includes selected causes of deaths; therefore, subcategories may not add to totals; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All causes	2,712,630	1,373,404	1,339,226	2,123,631	1,063,705	1,059,926	315,254	161,850	153,404	18,039	9,869	8,170	65,277	33,306	31,971	179,457	98,170	81,287
Enterocolitis due to *Clostridium difficile* (A04.7)	7,410	3,003	4,407	6,104	2,443	3,661	609	246	363	38	18	20	149	75	74	477	203	274
Septicemia (A40–A41)	40,773	19,385	21,388	30,240	14,309	15,931	6,576	3,061	3,515	296	130	166	798	418	380	2,692	1,370	1,322
Viral hepatitis (B15–B19)	7,461	4,977	2,484	4,797	3,203	1,594	1,124	747	377	102	70	32	224	121	103	1,144	785	359
Human immunodeficiency virus (HIV) disease (B20–B24)	6,465	4,796	1,669	1,984	1,660	324	3,379	2,230	1,149	53	34	19	73	64	9	889	734	155
Malignant neoplasms (C00–C97)	595,930	313,818	282,112	467,208	247,645	219,563	68,523	34,787	33,736	3,192	1,699	1,493	17,306	8,774	8,532	37,804	19,847	17,957
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	9,754	6,882	2,872	7,631	5,386	2,245	1,065	748	317	54	37	17	396	270	126	564	407	157
Malignant neoplasm of esophagus (C15)	15,212	12,187	3,025	12,915	10,463	2,452	1,212	853	359	90	76	14	260	208	52	683	545	138
Malignant neoplasm of stomach (C16)	11,331	6,754	4,577	6,589	4,016	2,573	1,994	1,215	779	81	55	26	874	472	402	1,753	977	776
Malignant neoplasms of colon, rectum and anus (C18–C21)	53,176	27,805	25,371	40,045	20,838	19,207	7,123	3,675	3,448	325	184	141	1,718	866	852	3,787	2,140	1,647
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	25,761	17,414	8,347	17,107	11,530	5,577	3,519	2,487	1,032	240	162	78	1,618	1,086	532	3,187	2,080	1,107
Malignant neoplasm of pancreas (C25)	41,615	21,392	20,223	32,138	16,842	15,296	5,022	2,355	2,667	207	101	106	1,309	623	686	2,821	1,402	1,419
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	153,819	83,700	70,119	126,835	68,088	58,747	16,115	9,306	6,809	796	425	371	3,831	2,195	1,636	5,701	3,360	2,341
Malignant melanoma of skin (C43)	8,885	5,811	3,074	8,426	5,541	2,885	125	77	48	10	3	7	58	32	26	238	141	97
Malignant neoplasm of breast (C50)	41,987	463	41,524	31,339	340	30,999	6,314	85	6,229	210	1	209	1,218	7	1,211	2,767	28	2,739
Malignant neoplasm of cervix uteri (C53)	4,175	. . .	4,175	2,627	. . .	2,627	750	. . .	750	32	. . .	32	191	. . .	191	563	. . .	563
Malignant neoplasm of ovary (C56)	13,920	. . .	13,920	11,024	. . .	11,024	1,335	. . .	1,335	91	. . .	91	442	. . .	442	999	. . .	999
Malignant neoplasm of prostate (C61)	28,848	28,848	. . .	21,513	21,513	. . .	4,678	4,678	. . .	143	143	. . .	574	574	. . .	1,867	1,867	. . .
Malignant neoplasms of kidney and renal pelvis (C64–C65)	14,448	9,502	4,946	11,364	7,521	3,843	1,411	891	520	108	72	36	301	199	102	1,232	804	428
Malignant neoplasm of bladder (C67)	16,254	11,587	4,667	14,016	10,160	3,856	1,176	704	472	48	30	18	262	183	79	688	463	225
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	16,268	9,119	7,149	13,508	7,621	5,887	1,055	570	485	60	39	21	436	225	211	1,181	645	536
Non-Hodgkin's lymphoma (C82–C85)	20,154	11,381	8,773	16,396	9,290	7,106	1,511	824	687	93	53	40	657	359	298	1,442	826	616
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	12,696	6,988	5,708	9,194	5,224	3,970	2,216	1,074	1,142	60	33	27	298	152	146	891	483	408
Leukemia (C91–C95)	22,665	13,251	9,414	18,447	10,874	7,573	1,863	1,009	854	93	61	32	583	349	234	1,611	914	697

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Includes selected causes of deaths; therefore, subcategories may not add to totals; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	16,277	8,647	7,630	13,404	7,253	6,151	1,466	695	771	72	38	34	426	204	222	860	429	431
Anemias (D50–D64)	5,250	2,253	2,997	3,754	1,594	2,160	1,039	451	588	36	17	19	111	47	64	293	137	156
Diabetes mellitus (E10–E14)	79,535	43,123	36,412	53,590	29,813	23,777	13,693	6,806	6,887	1,034	537	497	2,599	1,322	1,277	8,278	4,426	3,852
Nutritional deficiencies (E40–E64)	5,222	1,952	3,270	4,130	1,500	2,630	626	257	369	35	18	17	112	55	57	299	117	182
Obesity (E66)	7,430	3,788	3,642	5,344	2,802	2,542	1,386	599	787	74	40	34	79	49	30	505	275	230
Parkinson's disease (G20–G21)	27,972	16,867	11,105	24,339	14,778	9,561	1,181	684	497	93	56	37	747	448	299	1,546	860	686
Alzheimer's disease (G30)	110,561	33,690	76,871	93,325	28,631	64,694	8,072	2,154	5,918	307	100	207	2,180	675	1,505	6,444	2,035	4,409
Major cardiovascular diseases (I00–I78)	832,024	420,111	411,913	653,378	327,784	325,594	100,448	50,624	49,824	4,274	2,359	1,915	20,497	10,557	9,940	49,806	26,587	23,219
Diseases of heart (I00–I09,I11,I13,I20–I51)	633,842	335,002	298,840	503,172	264,784	238,388	74,093	38,638	35,455	3,303	1,916	1,387	13,974	7,612	6,362	36,401	20,225	16,176
Essential hypertension and hypertensive renal disease (I10,I12,I15)	32,200	13,934	18,266	22,628	9,526	13,102	5,740	2,599	3,141	192	87	105	1,136	515	621	2,384	1,139	1,245
Cerebrovascular diseases (I60–I69)	140,323	58,288	82,035	106,830	43,100	63,730	17,760	7,962	9,798	646	291	355	4,798	2,153	2,645	9,795	4,544	5,251
Atherosclerosis (I70)	6,088	2,549	3,539	5,105	2,106	2,999	530	225	305	31	14	17	112	52	60	280	131	149
Aortic aneurysm and dissection (I71)	9,988	5,870	4,118	8,084	4,755	3,329	1,026	580	446	46	30	16	317	167	150	477	312	165
Influenza and pneumonia (J09–J18)	57,062	26,903	30,159	45,242	20,995	24,247	5,554	2,729	2,825	330	181	149	2,161	1,109	1,052	3,497	1,735	1,762
Chronic lower respiratory diseases (J40–J47)	155,041	72,498	82,543	136,228	62,857	73,371	10,327	5,236	5,091	859	398	461	1,874	1,061	813	5,159	2,606	2,553
Pneumonitis due to solids and liquids (J69)	19,803	10,911	8,892	16,430	9,085	7,345	1,689	883	806	97	58	39	500	285	215	1,006	546	460
Chronic liver disease and cirrhosis (K70,K73–K74)	40,326	25,666	14,660	29,343	18,546	10,797	3,185	1,933	1,252	1,006	563	443	598	384	214	6,018	4,109	1,909
Alcoholic liver disease (K70)	21,028	14,715	6,313	14,978	10,327	4,651	1,571	986	585	769	451	318	262	208	54	3,334	2,653	681
Cholelithiasis and other disorders of gallbladder (K80-K82)	3,766	1,797	1,969	2,976	1,432	1,544	328	140	188	30	17	13	114	55	59	308	145	163
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19, N25–N27)	49,959	25,441	24,518	35,481	18,351	17,130	9,083	4,351	4,732	340	159	181	1,318	651	667	3,581	1,837	1,744
Pregnancy, childbirth and the puerperium (O00–O99)	1,140	. . .	1,140	541	. . .	541	373	. . .	373	19	. . .	19	47	. . .	47	158	. . .	158
Certain conditions originating in the perinatal period (P00–P96)	11,715	6,494	5,221	4,670	2,573	2,097	3,827	2,130	1,697	104	55	49	478	265	213	2,454	1,368	1,086
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	10,017	5,316	4,701	6,139	3,235	2,904	1,590	876	714	109	57	52	347	179	168	1,768	931	837
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	32,042	14,912	17,130	24,688	11,046	13,642	4,232	2,152	2,080	241	120	121	527	250	277	2,164	1,233	931

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Includes selected causes of deaths; therefore, subcategories may not add to totals; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	146,571	92,919	53,652	111,827	68,715	43,112	15,366	10,516	4,850	1,953	1,282	671	2,839	1,788	1,051	13,806	10,067	3,739
Motor vehicle accidents (V02–V04,V09.0, V09.2,V12–V14,V19.0–V19.2, V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86, V87.0–V87.8,V88.0–V88.8,V89.0,V89.2)	37,757	26,895	10,862	25,156	17,709	7,447	5,323	3,934	1,389	715	472	243	919	559	360	5,510	4,118	1,392
Falls (W00–W19)	33,381	16,881	16,500	28,913	14,277	14,636	1,458	851	607	183	102	81	821	450	371	1,894	1,133	761
Accidental discharge of firearms (W32–W34)	489	418	71	333	286	47	95	81	14	12	10	2	8	8	–	37	30	7
Accidental drowning and submersion (W65–W74)	3,602	2,716	886	2,310	1,687	623	553	442	111	67	49	18	187	136	51	467	388	79
Accidental hanging, strangulation, and suffocation (W75–W84)	6,914	3,942	2,972	5,175	2,943	2,232	988	555	433	73	41	32	131	78	53	513	305	208
Accidental exposure to smoke, fire and flames (X00–X09)	2,646	1,586	1,060	1,833	1,095	738	570	343	227	38	28	10	48	29	19	137	78	59
Accidental poisoning and exposure to noxious substances (X40–X49)	47,478	31,436	16,042	37,024	23,963	13,061	4,799	3,254	1,545	654	427	227	469	361	108	4,150	3,153	997
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)[5]	44,193	33,994	10,199	36,465	28,045	8,420	2,415	1,951	464	535	395	140	1,273	855	418	3,303	2,587	716
Intentional self-harm (suicide) by poisoning (X60–X69)	6,816	3,407	3,409	5,922	2,952	2,970	279	152	127	54	23	31	153	76	77	373	184	189
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	11,855	9,134	2,721	8,826	6,848	1,978	664	519	145	249	183	66	613	390	223	1,441	1,143	298
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	22,018	18,910	3,108	19,161	16,397	2,764	1,132	1,017	115	197	165	32	289	246	43	1,162	1,017	145
Assault (homicide) (*U01–*U02, X85–Y09,Y87.1)[5]	17,793	14,274	3,519	5,222	3,487	1,735	9,038	7,909	1,129	262	209	53	304	212	92	2,886	2,391	495
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)[5]	12,979	11,029	1,950	3,075	2,134	941	7,515	6,821	694	129	114	15	192	158	34	2,021	1,761	260

See footnotes at end of table.

Table 8. Number of deaths from selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Includes selected causes of deaths; therefore, subcategories may not add to totals; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases*, *Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Legal intervention (Y35,Y89.0)	530	508	22	283	271	12	120	113	7	8	8	–	15	13	2	99	98	1
Complications of medical and surgical care (Y40–Y84,Y88)	2,686	1,364	1,322	2,021	1,019	1,002	416	215	201	16	7	9	59	30	29	163	87	76
Drug-induced deaths[6]	55,403	34,815	20,588	43,917	26,902	17,015	5,505	3,664	1,841	593	353	240	577	416	161	4,387	3,175	1,212
Alcohol-induced deaths[6]	33,171	23,996	9,175	24,017	17,096	6,921	2,858	1,970	888	1,179	762	417	391	313	78	4,474	3,643	831
Injury by firearms[6]	36,252	31,032	5,220	23,026	19,208	3,818	8,904	8,068	836	353	301	52	504	426	78	3,332	2,912	420

... Category not applicable.
– Quantity zero.
[1]Includes deaths for origin not stated; see Technical Notes.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases*, *Tenth Revision* (ICD-10); see Technical Notes.
[6]Included in selected categories above. For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 9. Death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All causes	844.0	868.0	820.7	1,055.3	1,072.5	1,038.5	754.6	809.4	704.3	670.7	747.4	596.7	341.5	364.9	320.1	317.1	343.2	290.4
Enterocolitis due to *Clostridium difficile* (A04.7)	2.3	1.9	2.7	3.0	2.5	3.6	1.5	1.2	1.7	1.4	*	1.5	0.8	0.8	0.7	0.8	0.7	1.0
Septicemia (A40–A41)	12.7	12.3	13.1	15.0	14.4	15.6	15.7	15.3	16.1	11.0	9.8	12.1	4.2	4.6	3.8	4.8	4.8	4.7
Viral hepatitis (B15–B19)	2.3	3.1	1.5	2.4	3.2	1.6	2.7	3.7	1.7	3.8	5.3	2.3	1.2	1.3	1.0	2.0	2.7	1.3
Human immunodeficiency virus (HIV) disease (B20–B24)	2.0	3.0	1.0	1.0	1.7	0.3	8.1	11.2	5.3	2.0	2.6	*	0.4	0.7	*	1.6	2.6	0.6
Malignant neoplasms (C00–C97)	185.4	198.3	172.9	232.2	249.7	215.1	164.0	174.0	154.9	118.7	128.7	109.0	90.5	96.1	85.4	66.8	69.4	64.2
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	3.0	4.3	1.8	3.8	5.4	2.2	2.5	3.7	1.5	2.0	2.8	*	2.1	3.0	1.3	1.0	1.4	0.6
Malignant neoplasm of esophagus (C15)	4.7	7.7	1.9	6.4	10.5	2.4	2.9	4.3	1.6	3.3	5.8	*	1.4	2.3	0.5	1.2	1.9	0.5
Malignant neoplasm of stomach (C16)	3.5	4.3	2.8	3.3	4.0	2.5	4.8	6.1	3.6	3.0	4.2	1.9	4.6	5.2	4.0	3.1	3.4	2.8
Malignant neoplasms of colon, rectum and anus (C18–C21)	16.5	17.6	15.5	19.9	21.0	18.8	17.0	18.4	15.8	12.1	13.9	10.3	9.0	9.5	8.5	6.7	7.5	5.9
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	8.0	11.0	5.1	8.5	11.6	5.5	8.4	12.4	4.7	8.9	12.3	5.7	8.5	11.9	5.3	5.6	7.3	4.0
Malignant neoplasm of pancreas (C25)	12.9	13.5	12.4	16.0	17.0	15.0	12.0	11.8	12.2	7.7	7.6	7.7	6.8	6.8	6.9	5.0	4.9	5.1
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	47.9	52.9	43.0	63.0	68.6	57.6	38.6	46.5	31.3	29.6	32.2	27.1	20.0	24.0	16.4	10.1	11.7	8.4
Malignant melanoma of skin (C43)	2.8	3.7	1.9	4.2	5.6	2.8	0.3	0.4	0.2	*	*	*	0.3	0.4	0.3	0.4	0.5	0.3
Malignant neoplasm of breast (C50)	13.1	0.3	25.4	15.6	0.3	30.4	15.1	0.4	28.6	7.8	*	15.3	6.4	*	12.1	4.9	0.1	9.8
Malignant neoplasm of cervix uteri (C53)	1.3	...	2.6	1.3	...	2.6	1.8	...	3.4	1.2	...	2.3	1.0	...	1.9	1.0	...	2.0
Malignant neoplasm of ovary (C56)	4.3	...	8.5	5.5	...	10.8	3.2	...	6.1	3.4	...	6.6	2.3	...	4.4	1.8	...	3.6
Malignant neoplasm of prostate (C61)	9.0	18.2	...	10.7	21.7	...	11.2	23.4	...	5.3	10.8	...	3.0	6.3	...	3.3	6.5	...
Malignant neoplasms of kidney and renal pelvis (C64–C65)	4.5	6.0	3.0	5.6	7.6	3.8	3.4	4.5	2.4	4.0	5.5	2.6	1.6	2.2	1.0	2.2	2.8	1.5
Malignant neoplasm of bladder (C67)	5.1	7.3	2.9	7.0	10.2	3.8	2.8	3.5	2.2	1.8	2.3	*	1.4	2.0	0.8	1.2	1.6	0.8
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	5.1	5.8	4.4	6.7	7.7	5.8	2.5	2.9	2.2	2.2	3.0	1.5	2.3	2.5	2.1	2.1	2.3	1.9
Non-Hodgkin's lymphoma (C82–C85)	6.3	7.2	5.4	8.1	9.4	7.0	3.6	4.1	3.2	3.5	4.0	2.9	3.4	3.9	3.0	2.5	2.9	2.2
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.9	4.4	3.5	4.6	5.3	3.9	5.3	5.4	5.2	2.2	2.5	2.0	1.6	1.7	1.5	1.6	1.7	1.5
Leukemia (C91–C95)	7.1	8.4	5.8	9.2	11.0	7.4	4.5	5.0	3.9	3.5	4.6	2.3	3.0	3.8	2.3	2.8	3.2	2.5
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	5.1	5.5	4.7	6.7	7.3	6.0	3.5	3.5	3.5	2.7	2.9	2.5	2.2	2.2	2.2	1.5	1.5	1.5

See footnotes at end of table.

Table 9. Death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Anemias (D50–D64)	1.6	1.4	1.8	1.9	1.6	2.1	2.5	2.3	2.7	1.3	*	*	0.6	0.5	0.6	0.5	0.5	0.6
Diabetes mellitus (E10–E14)	24.7	27.3	22.3	26.6	30.1	23.3	32.8	34.0	31.6	38.4	40.7	36.3	13.6	14.5	12.8	14.6	15.5	13.8
Nutritional deficiencies (E40–E64)	1.6	1.2	2.0	2.1	1.5	2.6	1.5	1.3	1.7	1.3	*	*	0.6	0.6	0.6	0.5	0.4	0.7
Obesity (E66)	2.3	2.4	2.2	2.7	2.8	2.5	3.3	3.0	3.6	2.8	3.0	2.5	0.4	0.5	0.3	0.9	1.0	0.8
Parkinson's disease (G20–G21)	8.7	10.7	6.8	12.1	14.9	9.4	2.8	3.4	2.3	3.5	4.2	2.7	3.9	4.9	3.0	2.7	3.0	2.5
Alzheimer's disease (G30)	34.4	21.3	47.1	46.4	28.9	63.4	19.3	10.8	27.2	11.4	7.6	15.1	11.4	7.4	15.1	11.4	7.1	15.8
Major cardiovascular diseases (I00–I78)	258.9	265.5	252.4	324.7	330.5	319.0	240.4	253.2	228.7	158.9	178.7	139.9	107.2	115.7	99.5	88.0	93.0	83.0
Diseases of heart (I00–I09,I11,I13,I20–I51)	197.2	211.7	183.1	250.0	267.0	233.6	177.4	193.2	162.8	122.8	145.1	101.3	73.1	83.4	63.7	64.3	70.7	57.8
Essential hypertension and hypertensive renal disease (I10,I12,I15)	10.0	8.8	11.2	11.2	9.6	12.8	13.7	13.0	14.4	7.1	6.6	7.7	5.9	5.6	6.2	4.2	4.0	4.4
Cerebrovascular diseases (I60–I69)	43.7	36.8	50.3	53.1	43.5	62.4	42.5	39.8	45.0	24.0	22.0	25.9	25.1	23.6	26.5	17.3	15.9	18.8
Atherosclerosis (I70)	1.9	1.6	2.2	2.5	2.1	2.9	1.3	1.1	1.4	1.2	*	*	0.6	0.6	0.6	0.5	0.5	0.5
Aortic aneurysm and dissection (I71)	3.1	3.7	2.5	4.0	4.8	3.3	2.5	2.9	2.0	1.7	2.3	*	1.7	1.8	1.5	0.8	1.1	0.6
Influenza and pneumonia (J09–J18)	17.8	17.0	18.5	22.5	21.2	23.8	13.3	13.6	13.0	12.3	13.7	10.9	11.3	12.2	10.5	6.2	6.1	6.3
Chronic lower respiratory diseases (J40–J47)	48.2	45.8	50.6	67.7	63.4	71.9	24.7	26.2	23.4	31.9	30.1	33.7	9.8	11.6	8.1	9.1	9.1	9.1
Pneumonitis due to solids and liquids (J69)	6.2	6.9	5.4	8.2	9.2	7.2	4.0	4.4	3.7	3.6	4.4	2.8	2.6	3.1	2.2	1.8	1.9	1.6
Chronic liver disease and cirrhosis (K70,K73–K74)	12.5	16.2	9.0	14.6	18.7	10.6	7.6	9.7	5.7	37.4	42.6	32.4	3.1	4.2	2.1	10.6	14.4	6.8
Alcoholic liver disease (K70)	6.5	9.3	3.9	7.4	10.4	4.6	3.8	4.9	2.7	28.6	34.2	23.2	1.4	2.3	0.5	5.9	9.3	2.4
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.2	1.1	1.2	1.5	1.4	1.5	0.8	0.7	0.9	1.1	*	*	0.6	0.6	0.6	0.5	0.5	0.6
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19, N25–N27)	15.5	16.1	15.0	17.6	18.5	16.8	21.7	21.8	21.7	12.6	12.0	13.2	6.9	7.1	6.7	6.3	6.4	6.2
Pregnancy, childbirth and the puerperium (O00–O99)	0.4	...	0.7	0.3	...	0.5	0.9	...	1.7	*	...	*	0.2	...	0.5	0.3	...	0.6
Certain conditions originating in the perinatal period (P00–P96)	3.6	4.1	3.2	2.3	2.6	2.1	9.2	10.7	7.8	3.9	4.2	3.6	2.5	2.9	2.1	4.3	4.8	3.9
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.1	3.4	2.9	3.1	3.3	2.8	3.8	4.4	3.3	4.1	4.3	3.8	1.8	2.0	1.7	3.1	3.3	3.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	10.0	9.4	10.5	12.3	11.1	13.4	10.1	10.8	9.5	9.0	9.1	8.8	2.8	2.7	2.8	3.8	4.3	3.3

See footnotes at end of table.

Table 9. Death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Accidents (unintentional injuries) (V01–X59,Y85–Y86)	45.6	58.7	32.9	55.6	69.3	42.2	36.8	52.6	22.3	72.6	97.1	49.0	14.9	19.6	10.5	24.4	35.2	13.4
Motor vehicle accidents (V02–V04, V09.0,V09.2,V12–V14,V19.0–V19.2, V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86, V87.0–87.8,V88.0–V88.8,V89.0,V89.2)	11.7	17.0	6.7	12.5	17.9	7.3	12.7	19.7	6.4	26.6	35.7	17.7	4.8	6.1	3.6	9.7	14.4	5.0
Falls (W00–W19)	10.4	10.7	10.1	14.4	14.4	14.3	3.5	4.3	2.8	6.8	7.7	5.9	4.3	4.9	3.7	3.3	4.0	2.7
Accidental discharge of firearms (W32–W34)	0.2	0.3	0.0	0.2	0.3	0.0	0.2	0.4	*	*	*	*	*	*	*	0.1	0.1	*
Accidental drowning and submersion (W65–W74)	1.1	1.7	0.5	1.1	1.7	0.6	1.3	2.2	0.5	2.5	3.7	*	1.0	1.5	0.5	0.8	1.4	0.3
Accidental hanging, strangulation, and suffocation (W75–W84)	2.2	2.5	1.8	2.6	3.0	2.2	2.4	2.8	2.0	2.7	3.1	2.3	0.7	0.9	0.5	0.9	1.1	0.7
Accidental exposure to smoke, fire and flames (X00–X09)	0.8	1.0	0.6	0.9	1.1	0.7	1.4	1.7	1.0	1.4	2.1	*	0.3	0.3	*	0.2	0.3	0.2
Accidental poisoning and exposure to noxious substances (X40–X49)	14.8	19.9	9.8	18.4	24.2	12.8	11.5	16.3	7.1	24.3	32.3	16.6	2.5	4.0	1.1	7.3	11.0	3.6
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)[5]	13.7	21.5	6.2	18.1	28.3	8.3	5.8	9.8	2.1	19.9	29.9	10.2	6.7	9.4	4.2	5.8	9.0	2.6
Intentional self-harm (suicide) by poisoning (X60–X69)	2.1	2.2	2.1	2.9	3.0	2.9	0.7	0.8	0.6	2.0	1.7	2.3	0.8	0.8	0.8	0.7	0.6	0.7
Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)	3.7	5.8	1.7	4.4	6.9	1.9	1.6	2.6	0.7	9.3	13.9	4.8	3.2	4.3	2.2	2.5	4.0	1.1
Intentional self-harm (suicide) by discharge of firearms (X72–X74)	6.9	12.0	1.9	9.5	16.5	2.7	2.7	5.1	0.5	7.3	12.5	2.3	1.5	2.7	0.4	2.1	3.6	0.5
Assault (homicide) (*U01–*U02, X85–Y09,Y87.1)[5]	5.5	9.0	2.2	2.6	3.5	1.7	21.6	39.6	5.2	9.7	15.8	3.9	1.6	2.3	0.9	5.1	8.4	1.8
Assault (homicide) by discharge of firearms (*U01.4,X93–X95)[5]	4.0	7.0	1.2	1.5	2.2	0.9	18.0	34.1	3.2	4.8	8.6	*	1.0	1.7	0.3	3.6	6.2	0.9

See footnotes at end of table.

Table 9. Death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Rates on an annual basis per 100,000 population in specified group; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases*, *Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Legal intervention (Y35,Y89.0)	0.2	0.3	0.0	0.1	0.3	*	0.3	0.6	*	*	*	*	*	*	*	0.2	0.3	*
Complications of medical and surgical care (Y40–Y84,Y88)	0.8	0.9	0.8	1.0	1.0	1.0	1.0	1.1	0.9	*	*	*	0.3	0.3	0.3	0.3	0.3	0.3
Drug-induced deaths[6]	17.2	22.0	12.6	21.8	27.1	16.7	13.2	18.3	8.5	22.0	26.7	17.5	3.0	4.6	1.6	7.8	11.1	4.3
Alcohol-induced deaths[6]	10.3	15.2	5.6	11.9	17.2	6.8	6.8	9.9	4.1	43.8	57.7	30.5	2.0	3.4	0.8	7.9	12.7	3.0
Injury by firearms[6]	11.3	19.6	3.2	11.4	19.4	3.7	21.3	40.3	3.8	13.1	22.8	3.8	2.6	4.7	0.8	5.9	10.2	1.5

* Figure does not meet standards of reliability or precision; see Technical Notes.
... Category not applicable.
0.0 Quantity more than zero but less than 0.05.
[1]Includes deaths for origin not stated; see Technical Notes.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases*, *Tenth Revision* (ICD-10); see Technical Notes.
[6]Included in selected categories above. For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 10. Age-adjusted death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All causes	733.1	863.2	624.2	753.2	881.3	644.1	876.1	1,070.1	731.0	805.7	950.2	679.5	396.2	468.9	339.6	525.3	628.9	438.3
Enterocolitis due to *Clostridium difficile* (A04.7)	2.0	2.0	2.0	2.1	2.0	2.1	1.8	1.8	1.8	1.9	*	1.7	0.9	1.1	0.8	1.6	1.6	1.5
Septicemia (A40–A41)	11.0	12.1	10.1	10.6	11.6	9.8	18.6	21.4	16.8	13.0	12.3	13.5	4.9	6.0	4.0	8.1	9.3	7.2
Viral hepatitis (B15–B19)	1.9	2.6	1.2	1.7	2.3	1.1	2.5	3.7	1.6	3.7	5.6	2.1	1.2	1.5	1.1	2.7	3.8	1.7
Human immunodeficiency virus (HIV) disease (B20–B24)	1.9	2.8	1.0	0.9	1.4	0.3	8.2	11.6	5.3	2.0	2.8	*	0.4	0.7	*	1.8	3.1	0.6
Malignant neoplasms (C00–C97)	158.5	189.2	135.9	163.7	194.3	140.6	185.1	231.0	156.6	140.9	167.5	120.1	99.8	117.7	86.9	110.3	133.8	93.6
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	2.5	3.9	1.4	2.6	4.1	1.4	2.7	4.2	1.4	2.3	3.2	*	2.2	3.3	1.2	1.6	2.6	0.9
Malignant neoplasm of esophagus (C15)	4.0	7.0	1.4	4.5	7.9	1.5	3.1	5.2	1.6	3.7	6.7	*	1.5	2.6	0.5	2.0	3.5	0.7
Malignant neoplasm of stomach (C16)	3.1	4.1	2.3	2.3	3.2	1.6	5.6	8.2	3.8	3.4	4.9	2.1	5.1	6.4	4.2	4.9	6.2	3.9
Malignant neoplasms of colon, rectum and anus (C18–C21)	14.2	16.8	12.1	14.1	16.6	12.1	19.3	23.9	16.2	14.8	19.3	11.5	9.9	11.4	8.7	10.9	13.9	8.6
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	6.6	9.7	4.0	5.9	8.5	3.6	8.6	13.8	4.7	9.7	13.6	6.3	9.1	13.6	5.6	9.0	12.7	6.0
Malignant neoplasm of pancreas (C25)	11.0	12.6	9.6	11.1	12.9	9.6	13.7	15.2	12.5	8.9	9.0	8.6	7.7	8.4	7.2	8.4	9.2	7.8
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	40.5	49.5	33.5	43.8	52.2	37.3	43.1	60.3	31.5	34.8	42.2	29.0	22.4	29.8	16.9	17.8	24.3	12.9
Malignant melanoma of skin C43)	2.4	3.6	1.5	3.1	4.5	1.9	0.3	0.5	0.2	*	*	*	0.3	0.4	0.3	0.7	0.9	0.5
Malignant neoplasm of breast (C50)	11.2	0.3	20.3	11.2	0.3	20.4	16.7	0.6	28.5	9.3	*	16.7	6.6	*	11.8	7.4	0.2	13.5
Malignant neoplasm of cervix uteri (C53)	1.2	...	2.3	1.1	...	2.1	1.9	...	3.4	1.3	...	2.4	1.0	...	1.8	1.3	...	2.5
Malignant neoplasm of ovary (C56)	3.7	...	6.7	3.9	...	7.2	3.6	...	6.2	3.8	...	6.9	2.4	...	4.3	2.8	...	5.1
Malignant neoplasm of prostate (C61)	7.7	18.8	...	7.3	17.7	...	14.1	37.8	...	7.4	17.7	...	3.6	8.9	...	6.4	15.6	...
Malignant neoplasms of kidney and renal pelvis (C64–C65)	3.8	5.6	2.4	3.9	5.8	2.4	3.8	5.6	2.5	4.8	7.2	3.1	1.7	2.6	1.1	3.5	5.2	2.3
Malignant neoplasm of bladder (C67)	4.4	7.4	2.2	4.8	8.2	2.3	3.4	5.4	2.3	2.3	3.4	*	1.7	2.8	0.9	2.3	3.8	1.3
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	4.4	5.4	3.6	5.1	6.1	4.1	2.7	3.2	2.2	2.6	3.4	1.8	2.4	2.7	2.1	3.0	3.5	2.5
Non-Hodgkin's lymphoma (C82–C85)	5.4	7.1	4.2	5.8	7.5	4.4	4.2	5.3	3.3	4.5	5.3	3.7	3.9	5.0	3.1	4.3	5.5	3.4
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.4	4.3	2.7	3.2	4.2	2.5	6.3	7.6	5.5	2.9	3.8	2.2	1.7	2.0	1.5	2.8	3.4	2.3
Leukemia (C91–C95)	6.2	8.3	4.6	6.6	8.9	4.8	5.2	6.9	4.1	4.3	6.3	2.7	3.4	4.7	2.4	4.3	5.4	3.4
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	4.4	5.6	3.6	4.7	6.0	3.8	4.3	5.1	3.8	3.6	4.4	3.0	2.6	2.9	2.4	2.7	3.1	2.4
Anemias (D50–D64)	1.4	1.4	1.4	1.3	1.3	1.3	2.8	2.8	2.8	1.7	*	*	0.7	0.7	0.7	0.9	1.0	0.8
Diabetes mellitus E10–E14)	21.3	26.2	17.3	18.9	23.8	14.9	38.0	45.1	32.8	45.0	50.6	40.2	15.8	18.5	13.8	25.2	29.8	21.4
Nutritional deficiencies (E40–E64)	1.4	1.3	1.5	1.4	1.2	1.5	1.9	2.1	1.9	1.9	*	*	0.7	0.9	0.6	1.0	1.0	1.0
Obesity (E66)	2.1	2.2	1.9	2.1	2.3	1.9	3.5	3.3	3.6	2.8	3.2	2.3	0.4	0.6	0.3	1.1	1.2	1.1

See footnotes at end of table.

Table 10. Age-adjusted death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Parkinson's disease (G20–G21)	7.7	11.6	5.1	8.4	12.6	5.5	3.9	6.2	2.6	5.3	7.9	3.7	5.0	7.4	3.3	5.7	7.9	4.2
Alzheimer's disease (G30)	29.4	23.7	32.8	30.8	24.9	34.4	27.3	21.3	30.0	18.9	15.2	21.0	14.7	11.7	16.5	24.2	19.7	26.9
Major cardiovascular diseases (I00–I78)	221.5	266.6	184.4	223.0	268.4	185.1	287.2	350.3	239.9	202.9	243.4	168.2	127.4	153.0	107.3	160.9	194.0	133.8
Diseases of heart (I00–I09,I11,I13,I20–I51)	168.5	211.8	133.6	171.9	216.3	135.6	210.1	264.9	169.9	154.9	195.8	121.1	86.6	109.8	68.6	116.9	146.4	93.0
Essential hypertension and hypertensive renal disease (I10,I12,I15)	8.5	8.8	8.1	7.6	7.8	7.3	16.7	18.4	15.2	9.4	8.7	9.5	7.3	7.8	6.8	7.9	8.5	7.2
Cerebrovascular diseases (I60–I69)	37.6	37.8	36.9	36.4	35.8	36.2	52.2	57.0	47.9	32.0	31.9	31.6	30.0	31.4	28.6	32.3	34.2	30.4
Atherosclerosis (I70)	1.6	1.7	1.5	1.7	1.7	1.6	1.6	1.8	1.5	1.7	*	*	0.7	0.8	0.7	1.0	1.1	0.9
Aortic aneurysm and dissection (I71)	2.7	3.7	1.9	2.9	3.8	2.0	2.9	3.7	2.2	2.2	3.0	*	1.9	2.3	1.6	1.4	2.0	0.9
Influenza and pneumonia (J09–J18)	15.2	17.7	13.5	15.4	17.6	13.9	16.3	20.3	13.7	16.2	20.5	13.0	14.1	17.8	11.4	11.4	13.4	10.0
Chronic lower respiratory diseases (J40–J47)	41.6	46.0	38.6	46.9	50.5	44.4	29.7	38.5	24.3	40.4	44.0	38.2	12.1	16.8	9.0	17.7	21.7	14.9
Pneumonitis due to solids and liquids (J69)	5.3	7.3	4.0	5.6	7.7	4.2	5.1	7.2	3.9	4.8	6.7	3.5	3.3	4.7	2.4	3.4	4.5	2.7
Chronic liver disease and cirrhosis (K70,K73–K74)	10.8	14.5	7.6	11.1	14.6	7.9	7.6	10.2	5.5	39.2	45.3	33.5	3.2	4.5	2.2	14.9	20.8	9.4
Alcoholic liver disease (K70)	5.7	8.3	3.4	5.9	8.2	3.8	3.7	5.1	2.5	29.7	36.0	24.0	1.3	2.3	0.5	7.5	12.7	2.9
Cholelithiasis and other disorders of gallbladder (K80–K82)	1.0	1.1	0.9	1.0	1.2	0.9	1.0	1.0	0.9	1.5	*	*	0.7	0.9	0.6	1.0	1.1	0.9
Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	13.4	16.3	11.3	12.2	15.2	10.1	26.2	31.4	22.9	16.0	17.2	15.2	8.3	9.8	7.2	11.4	13.4	9.9
Pregnancy, childbirth and the puerperium (O00–O99)	0.4	...	0.8	0.3	...	0.6	0.9	...	1.8	*	...	*	0.2	...	0.4	0.3	...	0.6
Certain conditions originating in the perinatal period (P00–P96)	4.1	4.4	3.7	3.1	3.3	2.8	8.6	9.4	7.8	3.5	3.6	3.4	3.0	3.2	2.7	3.3	3.6	3.0
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.2	3.4	3.0	3.2	3.4	3.0	3.7	4.1	3.3	3.8	4.0	3.7	2.1	2.2	2.0	2.7	2.8	2.6
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	8.9	9.6	8.1	9.3	9.9	8.5	11.3	12.7	9.9	10.4	11.2	9.8	3.2	3.4	3.0	5.2	6.2	4.3
Accidents (unintentional injuries) (V01–X59, Y85–Y86)	43.2	58.7	28.7	49.0	65.2	33.6	38.2	56.8	22.6	77.1	104.3	51.7	16.0	21.9	11.0	28.6	41.5	16.1
Motor vehicle accidents (V02–V04,V09.0, V09.2,V12–V14,V19.0–V19.2, V19.4–V19.6,V20–V79,V80.3–V80.5, V81.0–V81.1,V82.0–V82.1,V83–V86, V87.0–V87.8,V88.0–V88.8,V89.0,V89.2)	11.4	16.7	6.4	11.8	17.0	6.8	12.7	19.9	6.3	26.7	36.2	17.7	4.9	6.3	3.6	10.2	15.2	5.2
Falls (W00-W19)	9.0	11.1	7.3	9.9	12.1	8.2	4.2	6.1	3.0	8.9	11.0	7.2	5.2	6.8	4.1	5.8	7.5	4.4

See footnotes at end of table.

Table 10. Age-adjusted death rates for selected causes, by race and Hispanic origin, and sex: United States, 2015—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards. Data for specified race or Hispanic-origin groups other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys, although misclassification is very minor for the Hispanic and non-Hispanic Asian or Pacific Islander populations; see Technical Notes]

Cause of death (based on *International Classification of Diseases*, *Tenth Revision*)	Total[1]			Non-Hispanic white[2]			Non-Hispanic black[2]			Non-Hispanic American Indian or Alaska Native[2,3]			Non-Hispanic Asian or Pacific Islander[2,4]			Hispanic		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Accidental discharge of firearm . . (W32–W34)	0.2	0.3	0.0	0.2	0.3	0.0	0.2	0.4	*	*	*	*	*	*	*	0.0	0.1	*
Accidental drowning and submersion . . . . . (W65–W74)	1.1	1.7	0.5	1.1	1.6	0.6	1.3	2.2	0.5	2.5	3.7	*	1.0	1.5	0.5	0.8	1.4	0.3
Accidental hanging, strangulation, and suffocation . . . . . (W75–W84)	2.0	2.5	1.5	2.1	2.7	1.6	2.6	3.3	2.0	3.0	3.4	2.6	0.8	1.1	0.6	1.2	1.5	0.9
Accidental exposure to smoke, fire and flames . . . . . (X00–X09)	0.8	0.9	0.6	0.7	1.0	0.6	1.5	2.1	1.0	1.5	2.3	*	0.3	0.4	*	0.4	0.4	0.3
Accidental poisoning and exposure to noxious substances. . . . . (X40–X49)	14.8	19.8	9.8	18.8	24.6	13.0	11.5	16.7	7.0	25.1	33.4	17.1	2.3	3.7	1.0	7.7	11.5	3.8
Intentional self-harm (suicide) . . . . . (*U03,X60–X84,Y87.0)[5]	13.3	21.1	6.0	17.0	26.6	7.8	5.8	10.0	2.1	20.0	30.3	10.2	6.5	9.2	4.0	6.2	9.9	2.6
Intentional self-harm (suicide) by poisoning . . . . . (X60–X69)	2.0	2.1	2.0	2.7	2.7	2.6	0.7	0.8	0.6	2.1	1.9	2.3	0.7	0.8	0.8	0.7	0.7	0.7
Intentional self-harm (suicide) by hanging, strangulation and suffocation . . . . . (X70)	3.7	5.8	1.7	4.5	7.0	2.0	1.6	2.5	0.7	9.0	13.6	4.5	3.1	4.3	2.1	2.6	4.2	1.0
Intentional self-harm (suicide) by discharge of firearms. . . . . (X72–X74)	6.5	11.6	1.8	8.6	15.1	2.6	2.7	5.3	0.5	7.5	12.9	2.5	1.4	2.6	0.4	2.2	4.0	0.5
Assault (homicide) . . . . . (*U01–*U02, X85–Y09,Y87.1)[5]	5.7	9.1	2.2	2.6	3.6	1.7	20.9	37.6	5.1	9.8	16.0	3.9	1.5	2.2	0.9	4.9	7.9	1.8
Assault (homicide) by discharge of firearms . . . . . (*U01.4,X93–X95)[5]	4.2	7.1	1.2	1.6	2.2	0.9	17.3	32.2	3.1	4.8	8.6	*	1.0	1.6	0.3	3.3	5.6	0.9
Legal intervention . . . . . (Y35,Y89.0)	0.2	0.3	0.0	0.1	0.3	*	0.3	0.5	*	*	*	*	*	*	*	0.2	0.3	*
Complications of medical and surgical care. . . . . (Y40–Y84,Y88)	0.7	0.8	0.7	0.7	0.8	0.7	1.1	1.3	0.9	*	*	*	0.4	0.4	0.3	0.5	0.5	0.4
Drug-induced deaths[6]	17.2	21.9	12.5	22.1	27.5	16.7	13.2	18.7	8.4	22.8	27.6	18.1	2.8	4.3	1.6	8.2	11.7	4.7
Alcohol-induced deaths[6]	9.1	13.6	5.0	9.6	13.8	5.6	6.7	10.3	3.9	45.6	60.9	31.5	1.9	3.4	0.7	9.9	16.9	3.5
Injury by firearms[6]	11.1	19.4	3.2	10.6	18.0	3.6	20.7	38.6	3.8	13.3	23.0	4.0	2.5	4.4	0.8	5.8	10.1	1.5

* Figure does not meet standards of reliability or precision; see Technical Notes.
... Category not applicable.
[1]Includes deaths for origin not stated; see Technical Notes.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Includes Aleut and Eskimo persons.
[4]Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.
[5]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases*, *Tenth Revision* (ICD–10); see Technical Notes.
[6]Included in selected categories above. For the list of ICD–10 codes included, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 11. Number of deaths, death rates, and age-adjusted death rates for injury deaths, by mechanism and intent of death for all injury death and leading causes of injury death: United States, 2015

[Totals for selected causes of death may differ from those shown in other tables that use standard mortality tabulation lists, see Technical Notes. Rates are per 100,000 population; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes. Populations used for computing death rates are postcensal estimates based on the 2010 census estimated as of July 1, 2015; see Technical Notes. Numbers in brackets [ ] apply to the code or range of codes preceding them. The asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, Tenth Revision* (ICD–10); see Technical Notes]

Mechanism and intent of death (based on ICD–10)	Number	Rate	Age-adjusted rate[1]
All injury (*U01–*U03,V01–Y36,Y85–Y87,Y89)	214,008	66.6	63.9
Unintentional (V01–X59,Y85–Y86)	146,571	45.6	43.2
Suicide (*U03,X60–X84,Y87.0)	44,193	13.7	13.3
Homicide (*U01–*U02,X85–Y09,Y87.1)	17,793	5.5	5.7
Undetermined (Y10–Y34,Y87.2,Y89.9)	4,915	1.5	1.5
Legal intervention/war (Y35–Y36,Y89[.0,.1])	536	0.2	0.2
Poisoning (*U01[.6–.7],X40–X49,X60–X69,X85–X90,Y10–Y19,Y35.2)	57,567	17.9	17.8
Unintentional (X40–X49)	47,478	14.8	14.8
Suicide (X60–X69)	6,816	2.1	2.0
Homicide (*U01[.6–.7],X85–X90)	111	0.0	0.0
Undetermined (Y10–Y19)	3,162	1.0	1.0
Legal intervention/war (Y35.2)	–	*	*
Firearm (*U01.4,W32–W34,X72–X74,X93–X95,Y22–Y24,Y35.0)	36,252	11.3	11.1
Unintentional (W32–W34)	489	0.2	0.2
Suicide (X72–X74)	22,018	6.9	6.5
Homicide (*U01.4,X93–X95)	12,979	4.0	4.2
Undetermined (Y22–Y24)	282	0.1	0.1
Legal intervention/war (Y35.0)	484	0.2	0.1
Motor vehicle traffic (V02–V04[.1,.9],V09.2,V12–V14[.3–.9],V19[.4–.6],V20–V28[.3–.9], V29–V79[.4–.9],V80[.3–.5],V81.1,V82.1,V83–V86[.0–.3],V87[.0–.8],V89.2)[2]	36,161	11.3	10.9
Occupant (V30–V79[.4–.9],V83–V86[.0–.3])[2]	8,313	2.6	2.5
Motorcyclist (V20–V28[.3–.9],V29[.4–.9])[2]	4,431	1.4	1.3
Pedal cyclist (V12–V14[.3–.9],V19[.4–.6])[2]	675	0.2	0.2
Pedestrian (V02–V04[.1,.9],V09.2)[2]	5,719	1.8	1.7
Other (V80[.3–.5],V81.1,V82.1)[2]	15	*	*
Unspecified (V87[.0–.8],V89.2)[2]	17,008	5.3	5.2
Fall (W00–W19,X80,Y01,Y30)	34,488	10.7	9.3
Unintentional (W00–W19)	33,381	10.4	9.0
Suicide (X80)	1,008	0.3	0.3
Homicide (Y01)	7	*	*
Undetermined (Y30)	92	0.0	0.0

0.0 Quantity more than zero but less than 0.05.
– Quantity zero.
* Figure does not meet standard of reliability or precision; see Technical Notes.
[1]For method of computation, see Technical Notes.
[2]Intent of death is unintentional.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 12. Number of deaths, death rates, and age-adjusted death rates for major causes of death: United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, 2015

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, Tenth Revision* (ICD–10). The asterisks (*) preceding cause-of-death codes indicate they are not part of ICD–10; see Technical Notes]

Area	All causes			Malignant neoplasms (C00–C97)			Diseases of heart (I00–I09,I11,I13,I20–I51)			Accidents (V01–X59,Y85–Y86)		
	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]
United States[2]	2,712,630	844.0	733.1	595,930	185.4	158.5	633,842	197.2	168.5	146,571	45.6	43.2
Alabama	51,909	1,068.3	924.5	10,354	213.1	175.6	12,981	267.2	229.7	2,552	52.5	50.9
Alaska	4,316	584.5	747.4	978	132.4	159.8	846	114.6	154.1	388	52.5	57.9
Arizona	54,299	795.2	671.8	11,776	172.5	141.3	11,458	167.8	138.8	3,539	51.8	49.2
Arkansas	31,617	1,061.6	901.8	6,727	225.9	185.4	7,938	266.5	223.2	1,538	51.6	49.6
California	259,206	662.2	621.6	59,629	152.3	142.8	61,289	156.6	145.6	12,544	32.0	30.6
Colorado	36,349	666.2	665.0	7,604	139.4	134.4	7,009	128.5	128.4	2,725	49.9	49.7
Connecticut	30,535	850.3	656.1	6,666	185.6	146.2	7,205	200.6	147.8	1,799	50.1	44.8
Delaware	8,582	907.3	741.5	2,010	212.5	165.6	1,940	205.1	165.2	449	47.5	46.0
District of Columbia	4,871	724.6	748.6	1,072	159.5	167.5	1,217	181.0	187.6	265	39.4	40.2
Florida	191,737	945.9	662.9	44,027	217.2	150.6	45,441	224.2	149.8	10,578	52.2	46.2
Georgia	79,942	782.6	808.1	16,945	165.9	163.0	17,769	174.0	180.2	4,344	42.5	43.2
Hawaii	11,053	772.1	588.2	2,462	172.0	135.3	2,605	182.0	135.6	536	37.4	32.2
Idaho	13,026	787.1	727.8	2,849	172.2	153.6	2,825	170.7	156.4	746	45.1	44.7
Illinois	106,872	831.0	728.3	24,713	192.2	167.6	25,652	199.5	171.5	4,850	37.7	35.8
Indiana	62,713	947.4	833.9	13,511	204.1	176.3	13,948	210.7	182.3	3,258	49.2	47.7
Iowa	29,600	947.5	724.6	6,513	208.5	164.1	6,813	218.1	160.9	1,537	49.2	42.1
Kansas	26,664	915.8	774.1	5,604	192.5	164.6	5,624	193.2	158.5	1,475	50.7	47.2
Kentucky	46,564	1,052.3	924.7	10,312	233.0	195.9	10,077	227.7	197.8	2,962	66.9	66.0
Louisiana	43,716	936.0	874.2	9,397	201.2	180.2	10,665	228.3	212.1	2,578	55.2	54.7
Maine	14,479	1,089.2	783.5	3,398	255.6	178.0	3,009	226.4	157.3	802	60.3	53.8
Maryland	47,247	786.6	705.7	10,568	175.9	155.0	11,481	191.1	169.3	1,903	31.7	29.7
Massachusetts	57,806	850.8	684.8	12,750	187.7	152.9	12,130	178.5	138.5	3,229	47.5	44.0
Michigan	95,140	958.8	784.4	20,732	208.9	168.0	24,794	249.9	198.9	4,647	46.8	43.9
Minnesota	42,800	779.7	653.8	9,925	180.8	153.0	7,844	142.9	116.6	2,574	46.9	42.0
Mississippi	31,783	1,062.1	963.7	6,485	216.7	188.4	7,969	266.3	240.5	1,814	60.6	59.8
Missouri	59,871	984.1	816.9	12,965	213.1	173.4	14,808	243.4	197.9	3,309	54.4	50.9
Montana	9,942	962.5	762.7	2,130	206.2	156.9	2,104	203.7	155.8	637	61.7	56.3
Nebraska	16,740	882.8	739.2	3,514	185.3	157.8	3,591	189.4	154.5	799	42.1	38.9
Nevada	22,879	791.4	757.2	5,015	173.5	157.2	6,114	211.5	200.9	1,340	46.4	45.4
New Hampshire	11,984	900.6	720.6	2,773	208.4	161.3	2,571	193.2	149.0	815	61.3	59.0
New Jersey	72,271	806.8	666.0	16,270	181.6	150.8	18,647	208.2	166.7	3,218	35.9	33.7
New Mexico	17,685	848.2	741.5	3,591	172.2	143.3	3,508	168.2	142.4	1,430	68.6	67.3
New York	153,628	776.1	644.0	35,089	177.3	148.4	44,450	224.5	181.6	6,515	32.9	30.2
North Carolina	89,133	887.5	789.9	19,322	192.4	164.7	18,474	184.0	162.4	4,991	49.7	47.9
North Dakota	6,223	822.1	696.8	1,320	174.4	152.9	1,323	174.8	142.4	368	48.6	44.1
Ohio	118,188	1,017.7	828.4	25,396	218.7	175.1	28,069	241.7	191.7	6,756	58.2	55.9
Oklahoma	39,422	1,007.9	904.3	8,280	211.7	184.3	10,310	263.6	234.0	2,422	61.9	60.1
Oregon	35,705	886.2	722.3	8,093	200.9	160.2	6,859	170.2	136.1	1,999	49.6	44.5
Pennsylvania	132,598	1,035.7	768.3	28,697	224.2	167.2	32,042	250.3	177.8	7,324	57.2	52.0
Rhode Island	10,163	962.1	721.9	2,226	210.7	163.1	2,371	224.5	160.4	649	61.4	53.1
South Carolina	47,198	964.0	840.0	9,950	203.2	166.6	10,092	206.1	177.8	2,737	55.9	54.0
South Dakota	7,731	900.6	715.4	1,640	191.0	154.0	1,711	199.3	150.9	469	54.6	49.5
Tennessee	66,570	1,008.6	886.4	14,214	215.4	180.5	15,730	238.3	207.3	3,873	58.7	56.4
Texas	189,654	690.4	745.0	39,121	142.4	149.2	43,298	157.6	171.6	9,976	36.3	37.4
Utah	17,334	578.6	712.1	3,091	103.2	125.2	3,598	120.1	152.9	1,223	40.8	45.6
Vermont	5,919	945.5	714.7	1,399	223.5	165.3	1,311	209.4	152.5	346	55.3	48.4
Virginia	65,577	782.3	721.6	14,947	178.3	159.5	14,077	167.9	154.2	3,429	40.9	39.6
Washington	54,595	761.4	687.4	12,687	176.9	156.4	11,025	153.8	137.6	3,192	44.5	41.9
West Virginia	22,752	1,233.8	943.4	4,839	262.4	190.4	4,727	256.3	191.3	1,516	82.2	77.9
Wisconsin	51,264	888.3	715.9	11,423	197.9	159.3	11,473	198.8	156.0	3,206	55.6	49.3
Wyoming	4,778	815.2	748.3	931	158.8	139.4	1,030	175.7	159.4	400	68.2	65.8
Puerto Rico	28,085	808.4	624.7	5,158	148.5	112.4	4,972	143.1	106.7	911	26.2	22.7
Virgin Islands	673	649.8	531.0	137	132.3	96.7	133	128.4	97.1	28	27.0	23.8
Guam	985	608.8	798.6	189	116.8	146.9	303	187.3	260.6	31	19.2	21.0
American Samoa	303	557.6	1,165.0	46	84.6	175.3	61	112.2	227.7	9	*	*
Northern Marianas	223	426.0	876.0	49	93.6	185.2	47	89.8	201.1	10	*	*

See footnotes at end of table.

Table 12. Number of deaths, death rates, and age-adjusted death rates for major causes of death: United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, 2015—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, Tenth Revision* (ICD–10). The asterisks (*) preceding cause-of-death codes indicate they are not part of ICD–10; see Technical Notes]

Area	Motor vehicle accidents[3]			Accidental poisoning and exposure to noxious substances (X40–X49)			Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)			Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)		
	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]
United States[2]	37,757	11.7	11.4	47,478	14.8	14.8	44,193	13.7	13.3	17,793	5.5	5.7
Alabama	962	19.8	19.4	701	14.4	15.0	750	15.4	14.9	473	9.7	10.2
Alaska	74	10.0	10.6	135	18.3	18.0	201	27.2	26.9	62	8.4	8.0
Arizona	920	13.5	13.4	1,088	15.9	16.4	1,276	18.7	18.2	364	5.3	5.5
Arkansas	593	19.9	19.6	303	10.2	10.8	577	19.4	19.1	217	7.3	7.4
California	3,721	9.5	9.2	4,376	11.2	10.7	4,167	10.6	10.3	1,987	5.1	5.0
Colorado	587	10.8	10.4	801	14.7	14.3	1,093	20.0	19.5	206	3.8	3.7
Connecticut	286	8.0	7.6	773	21.5	21.5	384	10.7	9.9	124	3.5	3.6
Delaware	129	13.6	13.2	177	18.7	19.6	122	12.9	12.6	65	6.9	7.5
District of Columbia	43	6.4	6.6	128	19.0	18.6	34	5.1	4.9	136	20.2	17.5
Florida	2,983	14.7	14.3	2,938	14.5	15.0	3,205	15.8	14.4	1,208	6.0	6.3
Georgia	1,471	14.4	14.3	1,222	12.0	11.9	1,317	12.9	12.7	738	7.2	7.3
Hawaii	105	7.3	6.9	143	10.0	9.6	201	14.0	13.5	31	2.2	2.2
Idaho	243	14.7	14.9	169	10.2	10.9	359	21.7	22.1	33	2.0	2.0
Illinois	1,108	8.6	8.3	1,703	13.2	13.2	1,363	10.6	10.3	863	6.7	6.9
Indiana	854	12.9	12.6	1,151	17.4	18.0	960	14.5	14.4	389	5.9	6.0
Iowa	352	11.3	10.6	286	9.2	9.5	433	13.9	13.9	73	2.3	2.5
Kansas	398	13.7	13.4	291	10.0	10.5	477	16.4	16.3	132	4.5	4.7
Kentucky	831	18.8	18.6	1,200	27.1	28.1	776	17.5	17.1	250	5.6	5.8
Louisiana	805	17.2	17.0	804	17.2	17.8	722	15.5	15.2	569	12.2	12.4
Maine	151	11.4	11.3	266	20.0	21.2	235	17.7	16.0	22	1.7	1.7
Maryland	518	8.6	8.3	397	6.6	6.4	553	9.2	8.8	596	9.9	10.3
Massachusetts	393	5.8	5.4	1,663	24.5	24.9	642	9.4	8.9	144	2.1	2.1
Michigan	880	8.9	8.6	1,696	17.1	17.5	1,410	14.2	13.8	597	6.0	6.4
Minnesota	476	8.7	8.3	548	10.0	10.0	730	13.3	13.2	147	2.7	2.8
Mississippi	769	25.7	25.7	323	10.8	11.5	431	14.4	14.0	325	10.9	11.3
Missouri	932	15.3	14.8	933	15.3	15.7	1,052	17.3	17.1	547	9.0	9.6
Montana	220	21.3	21.1	99	9.6	9.7	272	26.3	25.3	38	3.7	4.0
Nebraska	268	14.1	13.9	124	6.5	6.9	223	11.8	11.7	75	4.0	4.0
Nevada	365	12.6	12.6	540	18.7	17.8	558	19.3	18.4	191	6.6	6.7
New Hampshire	106	8.0	7.5	385	28.9	31.7	228	17.1	16.5	18	*	*
New Jersey	591	6.6	6.3	1,405	15.7	15.9	789	8.8	8.3	388	4.3	4.5
New Mexico	342	16.4	16.5	480	23.0	24.6	500	24.0	23.7	157	7.5	8.0
New York	1,189	6.0	5.7	2,539	12.8	12.5	1,652	8.3	7.8	671	3.4	3.4
North Carolina	1,518	15.1	14.7	1,432	14.3	14.5	1,406	14.0	13.4	593	5.9	6.1
North Dakota	137	18.1	17.2	62	8.2	8.3	124	16.4	17.5	22	2.9	3.1
Ohio	1,257	10.8	10.5	3,171	27.3	28.7	1,650	14.2	13.9	669	5.8	6.0
Oklahoma	673	17.2	17.1	677	17.3	17.8	790	20.2	20.3	324	8.3	8.5
Oregon	501	12.4	11.9	408	10.1	9.8	762	18.9	17.8	138	3.4	3.4
Pennsylvania	1,296	10.1	9.6	3,070	24.0	24.9	1,894	14.8	14.0	673	5.3	5.6
Rhode Island	55	5.2	5.0	307	29.1	28.0	127	12.0	11.2	28	2.7	2.8
South Carolina	985	20.1	19.8	713	14.6	14.7	742	15.2	14.8	448	9.2	9.5
South Dakota	143	16.7	16.2	57	6.6	7.3	173	20.2	20.4	35	4.1	4.2
Tennessee	988	15.0	14.6	1,326	20.1	20.3	1,068	16.2	15.7	460	7.0	7.2
Texas	3,722	13.5	13.6	2,458	8.9	8.9	3,403	12.4	12.5	1,538	5.6	5.6
Utah	282	9.4	9.9	465	15.5	16.7	630	21.0	22.4	60	2.0	2.0
Vermont	54	8.6	8.0	86	13.7	14.5	103	16.5	14.8	16	*	*
Virginia	791	9.4	9.1	945	11.3	11.3	1,118	13.3	12.7	374	4.5	4.5
Washington	641	8.9	8.7	959	13.4	13.0	1,137	15.9	15.4	239	3.3	3.4
West Virginia	304	16.5	16.3	675	36.6	38.6	340	18.4	17.4	80	4.3	4.5
Wisconsin	611	10.6	10.1	785	13.6	14.0	877	15.2	14.7	243	4.2	4.5
Wyoming	134	22.9	23.1	95	16.2	15.9	157	26.8	28.0	17	*	*

See footnotes at end of table.

Table 12. Number of deaths, death rates, and age-adjusted death rates for major causes of death: United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, 2015—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes. Codes in parentheses after causes of death are categories of the *International Classification of Diseases*, *Tenth Revision* (ICD–10). The asterisks (*) preceding cause-of-death codes indicate they are not part of ICD–10; see Technical Notes]

Area	Motor vehicle accidents[3]			Accidental poisoning and exposure to noxious substances (X40–X49)			Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)			Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)		
	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]
Puerto Rico	328	9.4	8.9	28	0.8	0.7	226	6.5	6.0	588	16.9	17.9
Virgin Islands	12	*	*	1	*	*	3	*	*	43	41.5	48.3
Guam	9	*	*	–	*	*	33	20.4	19.4	7	*	*
American Samoa	2	*	*	1	*	*	2	*	*	2	*	*
Northern Marianas	1	*	*	1	*	*	10	*	*	2	*	*

* Figure does not meet standards of reliability or precision; see Technical Notes.
– Quantity zero.
[1]Death rates are affected by population composition of the area. Age-adjusted death rates should be used for comparisons between areas; for method of computation, see Technical Notes.
[2]Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.
[3]ICD–10 codes for Motor vehicle accidents are V02–V04, V09.0, V09.2, V12–V14, V19.0–V19.2, V19.4–V19.6, V20–V79, V80.3–V80.5, V81.0–V81.1, V82.0–V82.1, V83–V86, V87.0–V87.8, V88.0–V88.8, V89.0, and V89.2; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 13. Infant, neonatal, and postneonatal mortality rates, by race and Hispanic origin, and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000–2015

[Rates are infant (under 1 year), neonatal (under 28 days), and postneonatal (28 days–11 months) deaths per 1,000 live births in specified group. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Year	Total[1]			Non-Hispanic white[2,3]			Non-Hispanic black[2,3]			Hispanic[3]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
						Infant mortality rate						
2015	5.90	6.39	5.38	4.82	5.27	4.36	11.73	12.75	10.67	5.20	5.56	4.83
2014	5.82	6.31	5.30	4.81	5.26	4.34	11.37	12.33	10.39	5.22	5.63	4.79
2013	5.96	6.52	5.38	4.96	5.53	4.36	11.61	12.48	10.73	5.27	5.65	4.88
2012	5.98	6.50	5.43	4.97	5.38	4.54	11.59	12.80	10.35	5.30	5.76	4.83
2011	6.07	6.58	5.52	5.05	5.52	4.56	11.98	13.13	10.80	5.25	5.59	4.90
2010	6.15	6.69	5.57	5.10	5.54	4.64	11.99	13.08	10.85	5.47	5.96	4.96
2009	6.39	7.01	5.75	5.25	5.76	4.71	13.07	14.60	11.49	5.43	5.86	4.98
2008	6.61	7.21	5.97	5.52	6.04	4.97	13.14	14.37	11.88	5.66	6.16	5.13
2007	6.75	7.38	6.09	5.63	6.20	5.03	13.76	15.04	12.43	5.71	6.17	5.23
2006	6.69	7.32	6.03	5.59	6.15	5.00	13.78	14.98	12.53	5.52	5.99	5.03
2005	6.87	7.56	6.15	5.71	6.69	4.79	14.28	15.75	12.76	5.81	6.34	5.25
2004	6.79	7.47	6.09	5.68	6.28	5.05	14.20	15.65	12.70	5.62	6.10	5.12
2003	6.85	7.60	6.07	5.69	6.37	4.98	14.16	15.70	12.57	5.79	6.32	5.24
2002	6.97	7.64	6.27	5.86	6.54	5.14	14.32	15.39	13.23	5.64	6.14	5.11
2001	6.85	7.52	6.14	5.72	6.30	5.12	14.03	15.53	12.49	5.49	5.99	4.97
2000	6.91	7.57	6.21	5.72	6.32	5.08	14.11	15.50	12.66	5.64	6.04	5.22
1990	9.22	10.26	8.13	---	---	---	---	---	---	---	---	---
1980	12.60	13.93	11.21	---	---	---	---	---	---	---	---	---
1970	20.01	22.37	17.52	---	---	---	---	---	---	---	---	---
1960	26.04	29.33	22.59	---	---	---	---	---	---	---	---	---
1950	29.21	32.75	25.48	---	---	---	---	---	---	---	---	---
1940	47.02	52.45	41.29	---	---	---	---	---	---	---	---	---
						Neonatal mortality rate						
2015	3.93	4.22	3.64	3.16	3.37	2.92	7.60	8.16	7.02	3.73	4.02	3.42
2014	3.94	4.25	3.62	3.23	3.48	2.97	7.51	8.13	6.87	3.67	3.98	3.34
2013	4.04	4.37	3.68	3.33	3.67	2.97	7.66	8.16	7.14	3.73	3.99	3.45
2012	4.01	4.34	3.67	3.31	3.54	3.06	7.58	8.30	6.83	3.71	4.05	3.35
2011	4.06	4.36	3.73	3.34	3.62	3.06	7.85	8.53	7.14	3.67	3.87	3.46
2010	4.05	4.37	3.71	3.34	3.58	3.07	7.71	8.32	7.09	3.73	4.07	3.37
2009	4.18	4.53	3.81	3.42	3.68	3.14	8.42	9.34	7.46	3.63	3.89	3.36
2008	4.29	4.67	3.89	3.53	3.84	3.21	8.46	9.24	7.64	3.81	4.16	3.45
2007	4.42	4.79	4.02	3.64	3.96	3.31	8.97	9.82	8.09	3.82	4.12	3.51
2006	4.45	4.84	4.05	3.69	4.04	3.32	9.10	9.85	8.32	3.79	4.07	3.49
2005	4.54	4.93	4.12	3.74	4.26	3.24	9.40	10.33	8.44	3.92	4.29	3.52
2004	4.52	4.94	4.09	3.76	4.13	3.37	9.36	10.21	8.48	3.84	4.17	3.49
2003	4.62	5.08	4.14	3.84	4.26	3.39	9.46	10.47	8.42	3.95	4.24	3.65
2002	4.66	5.06	4.25	3.92	4.32	3.51	9.46	10.07	8.83	3.80	4.13	3.45
2001	4.54	4.97	4.08	3.82	4.17	3.45	9.20	10.16	8.20	3.65	4.08	3.21
2000	4.63	5.06	4.17	3.84	4.21	3.45	9.36	10.35	8.34	3.74	4.01	3.45
1990	5.85	6.50	5.16	---	---	---	---	---	---	---	---	---
1980	8.48	9.31	7.60	---	---	---	---	---	---	---	---	---
1970	15.08	16.96	13.10	---	---	---	---	---	---	---	---	---
1960	18.73	21.24	16.09	---	---	---	---	---	---	---	---	---
1950	20.50	23.34	17.50	---	---	---	---	---	---	---	---	---
1940	28.75	32.56	24.74	---	---	---	---	---	---	---	---	---

See footnotes at end of table.

Table 13. Infant, neonatal, and postneonatal mortality rates, by race and Hispanic origin, and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000–2015

[Rates are infant (under 1 year), neonatal (under 28 days), and postneonatal (28 days–11 months) deaths per 1,000 live births in specified group. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Year	Total[1]			Non-Hispanic white[2,3]			Non-Hispanic black[2,3]			Hispanic[3]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Postneonatal mortality rate											
2015	1.96	2.17	1.74	1.67	1.89	1.43	4.13	4.59	3.65	1.47	1.54	1.41
2014	1.88	2.07	1.68	1.58	1.78	1.37	3.86	4.21	3.51	1.55	1.66	1.45
2013	1.93	2.15	1.70	1.63	1.86	1.38	3.96	4.31	3.59	1.54	1.66	1.43
2012	1.97	2.16	1.76	1.66	1.84	1.47	4.02	4.49	3.52	1.60	1.71	1.47
2011	2.01	2.22	1.79	1.71	1.90	1.50	4.14	4.60	3.67	1.58	1.72	1.44
2010	2.10	2.32	1.87	1.76	1.96	1.56	4.28	4.77	3.77	1.74	1.89	1.59
2009	2.22	2.48	1.94	1.83	2.07	1.57	4.65	5.26	4.03	1.80	1.96	1.62
2008	2.32	2.54	2.08	1.99	2.20	1.76	4.69	5.12	4.23	1.84	2.00	1.68
2007	2.34	2.58	2.07	1.98	2.23	1.72	4.79	5.22	4.34	1.89	2.05	1.72
2006	2.24	2.48	1.98	1.91	2.11	1.68	4.68	5.13	4.21	1.73	1.92	1.53
2005	2.34	2.63	2.03	1.98	2.43	1.55	4.88	5.41	4.32	1.89	2.05	1.73
2004	2.27	2.53	2.00	1.92	2.15	1.68	4.84	5.45	4.22	1.78	1.93	1.63
2003	2.23	2.52	1.94	1.86	2.11	1.59	4.70	5.23	4.15	1.84	2.08	1.59
2002	2.31	2.58	2.03	1.94	2.22	1.64	4.87	5.32	4.40	1.84	2.01	1.66
2001	2.31	2.55	2.06	1.90	2.13	1.66	4.83	5.36	4.28	1.84	1.92	1.76
2000	2.28	2.51	2.04	1.88	2.11	1.63	4.74	5.15	4.32	1.90	2.02	1.77
1990	3.38	3.76	2.97	---	---	---	---	---	---	---	---	---
1980	4.13	4.62	3.61	---	---	---	---	---	---	---	---	---
1970	4.93	5.41	4.42	---	---	---	---	---	---	---	---	---
1960	7.31	8.10	6.49	---	---	---	---	---	---	---	---	---
1950	8.71	9.41	7.98	---	---	---	---	---	---	---	---	---
1940	18.27	19.89	16.55	---	---	---	---	---	---	---	---	---

--- Data not available.

[1]Includes races and origins not shown separately.

[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

[3]Infant deaths are based on race or Hispanic origin of child as stated on the death certificate; live births are based on race or Hispanic origin of mother as stated on the birth certificate; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 OMB standards.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 14. Number of infant deaths and infant mortality rates for selected causes, by race and Hispanic origin: United States, 2015

[Rates are infant deaths (under 1 year) per 100,000 live births in specified group. Infant deaths are based on race or Hispanic origin of decedent; live births are based on race or Hispanic origin of mother. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Cause of death (based on *International Classification of Diseases, Tenth Revision*)	Number[1]				Rate			
	Total[2]	Non-Hispanic white[3]	Non-Hispanic black[3]	Hispanic	Total[2]	Non-Hispanic white[3]	Non-Hispanic black[3]	Hispanic
All causes	23,455	10,277	6,907	4,805	589.5	482.4	1,172.6	520.0
Certain intestinal infectious diseases (A00–A08)	11	5	2	–	*	*	*	*
Diarrhea and gastroenteritis of infectious origin (A09)	210	73	80	42	5.3	3.4	13.6	4.5
Tuberculosis (A16–A19)	–	–	–	–	*	*	*	*
Tetanus (A33,A35)	–	–	–	–	*	*	*	*
Diphtheria (A36)	–	–	–	–	*	*	*	*
Whooping cough (A37)	6	–	1	5	*	*	*	*
Meningococcal infection (A39)	2	1	1	–	*	*	*	*
Septicemia (A40–A41)	180	71	58	41	4.5	3.3	9.8	4.4
Congenital syphilis (A50)	2	–	2	–	*	*	*	*
Gonococcal infection (A54)	–	–	–	–	*	*	*	*
Acute poliomyelitis (A80)	–	–	–	–	*	*	*	*
Varicella (chickenpox) (B01)	–	–	–	–	*	*	*	*
Measles (B05)	–	–	–	–	*	*	*	*
Human immunodeficiency virus (HIV) disease (B20–B24)	2	1	1	–	*	*	*	*
Mumps (B26)	–	–	–	–	*	*	*	*
Candidiasis (B37)	7	4	1	2	*	*	*	*
Malaria (B50–B54)	–	–	–	–	*	*	*	*
Pneumocystosis (B59)	–	–	–	–	*	*	*	*
Malignant neoplasms (C00–C97)	53	25	8	13	1.3	1.2	*	*
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	47	28	7	8	1.2	1.3	*	*
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	95	40	28	16	2.4	1.9	4.8	*
Short stature, not elsewhere classified (E34.3)	4	2	–	1	*	*	*	*
Nutritional deficiencies (E40–E64)	9	5	1	3	*	*	*	*
Cystic fibrosis (E84)	7	5	–	1	*	*	*	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86–E87)	43	23	13	7	1.1	1.1	*	*
Meningitis (G00,G03)	51	22	15	12	1.3	1.0	*	*
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)	2	–	1	1	*	*	*	*
Infantile cerebral palsy (G80)	2	1	1	–	*	*	*	*
Anoxic brain damage, not elsewhere classified (G93.1)	50	32	10	6	1.3	1.5	*	*
Diseases of the ear and mastoid process (H60–H93)	2	–	1	–	*	*	*	*
Diseases of the circulatory system (I00–I99)	428	196	128	74	10.8	9.2	21.7	8.0
Acute upper respiratory infections (J00–J06)	15	7	6	2	*	*	*	*
Influenza and pneumonia (J09–J18)	174	77	56	30	4.4	3.6	9.5	3.2
Acute bronchitis and acute bronchiolitis (J20–J21)	50	21	18	6	1.3	1.0	*	*
Bronchitis, chronic and unspecified (J40–J42)	19	8	8	3	*	*	*	*
Asthma (J45–J46)	3	–	2	1	*	*	*	*
Pneumonitis due to solids and liquids (J69)	8	2	3	2	*	*	*	*
Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50–K55)	30	10	10	9	0.8	*	*	*
Hernia of abdominal cavity and intestinal obstruction without hernia (K40–K46,K56)	52	29	12	7	1.3	1.4	*	*
Renal failure and other disorders of kidney (N17–N19,N25,N27)	83	35	24	19	2.1	1.6	4.1	*
Newborn affected by maternal hypertensive disorders (P00.0)	87	26	39	17	2.2	1.2	6.6	*

See footnotes at end of table.

Table 14. Number of infant deaths and infant mortality rates for selected causes, by race and Hispanic origin: United States, 2015—Con.

[Rates are infant deaths (under 1 year) per 100,000 live births in specified group. Infant deaths are based on race or Hispanic origin of decedent; live births are based on race or Hispanic origin of mother. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

Cause of death (based on *International Classification of Diseases*, *Tenth Revision*)	Number[1]				Rate			
	Total[2]	Non-Hispanic white[3]	Non-Hispanic black[3]	Hispanic	Total[2]	Non-Hispanic white[3]	Non-Hispanic black[3]	Hispanic
Newborn affected by other maternal conditions which may be unrelated to present pregnancy (P00.1–P00.9)	85	40	22	17	2.1	1.9	3.7	*
Newborn affected by maternal complications of pregnancy (P01)	1,522	606	458	339	38.3	28.4	77.8	36.7
Newborn affected by complications of placenta, cord and membranes (P02)	910	379	270	194	22.9	17.8	45.8	21.0
Newborn affected by other complications of labor and delivery (P03)	127	46	34	28	3.2	2.2	5.8	3.0
Newborn affected by noxious influences transmitted via placenta or breast milk (P04)	51	28	11	10	1.3	1.3	*	*
Slow fetal growth and fetal malnutrition (P05)	112	54	38	12	2.8	2.5	6.5	*
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	4,084	1,485	1,513	824	102.7	69.7	256.9	89.2
Disorders related to long gestation and high birth weight (P08)	1	1	–	–	*	*	*	*
Birth trauma (P10–P15)	13	8	4	1	*	*	*	*
Intrauterine hypoxia and birth asphyxia (P20–P21)	314	150	93	56	7.9	7.0	15.8	6.1
Respiratory distress of newborn (P22)	462	184	168	87	11.6	8.6	28.5	9.4
Other respiratory conditions originating in the perinatal period (P23–P28)	790	345	252	156	19.9	16.2	42.8	16.9
Congenital pneumonia (P23)	49	18	11	16	1.2	*	*	*
Neonatal aspiration syndromes (P24)	46	31	4	8	1.2	1.5	*	*
Interstitial emphysema and related conditions originating in the perinatal period (P25)	93	37	37	15	2.3	1.7	6.3	*
Pulmonary hemorrhage originating in the perinatal period (P26)	152	58	55	28	3.8	2.7	9.3	3.0
Chronic respiratory disease originating in the perinatal period (P27)	115	46	46	20	2.9	2.2	7.8	2.2
Atelectasis (P28.0–P28.1)	273	118	84	62	6.9	5.5	14.3	6.7
Bacterial sepsis of newborn (P36)	599	230	208	127	15.1	10.8	35.3	13.7
Omphalitis of newborn with or without mild hemorrhage (P38)	1	1	–	–	*	*	*	*
Neonatal hemorrhage (P50–P52,P54)	406	177	99	99	10.2	8.3	16.8	10.7
Hemorrhagic disease of newborn (P53)	1	–	–	1	*	*	*	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55–P59)	6	3	2	1	*	*	*	*
Hematological disorders (P60–P61)	102	48	22	23	2.6	2.3	3.7	2.5
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	6	1	2	–	*	*	*	*
Necrotizing enterocolitis of newborn (P77)	363	133	126	82	9.1	6.2	21.4	8.9
Hydrops fetalis not due to hemolytic disease (P83.2)	177	95	21	47	4.4	4.5	3.6	5.1
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,825	2,373	930	1,216	121.3	111.4	157.9	131.6
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	2,819	1,328	928	423	70.9	62.3	157.5	45.8
Sudden infant death syndrome (R95)	1,568	771	513	202	39.4	36.2	87.1	21.9
Accidents (unintentional injuries) (V01–X59)	1,291	632	410	187	32.4	29.7	69.6	20.2
Assault (homicide) (*U01,X85–Y09)[4]	263	119	92	40	6.6	5.6	15.6	4.3
Complications of medical and surgical care (Y40–Y84)	12	7	4	1	*	*	*	*

– Quantity zero.
* Data does not meet standards of reliability or precision; see Technical Notes.
[1]Only selected causes of deaths are shown; therefore, subcategories do not add to totals; see Technical Notes.
[2]Includes races and origins not shown separately.
[3]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[4]Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases*, *Tenth Revision*; see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Table 15. Number of infant deaths and mortality rates, by race and Hispanic origin for United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, and by sex for United States, 2015

[Rates are infant (under 1 year) deaths per 1,000 live births in specified group. Infant deaths are based on race or Hispanic origin of decedent; live births are based on race or Hispanic origin of mother; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards; see Technical Notes]

Area and sex	Infant deaths							
	Total[1]		Non-Hispanic white[2]		Non-Hispanic black[2]		Hispanic	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
United States[3]	23,455	5.9	10,277	4.8	6,907	11.7	4,805	5.2
Male	13,008	6.4	5,758	5.3	3,815	12.8	2,619	5.6
Female	10,447	5.4	4,519	4.4	3,092	10.7	2,186	4.8
Alabama	495	8.3	185	5.2	278	15.2	27	6.3
Alaska	78	6.9	36	5.5	2	*	2	*
Arizona	469	5.5	153	4.1	49	10.7	213	6.0
Arkansas	293	7.5	172	6.7	96	12.7	19	*
California	2,169	4.4	547	3.9	259	9.6	1,115	4.8
Colorado	309	4.6	157	3.8	36	10.4	102	5.6
Connecticut	200	5.6	73	3.6	56	12.6	64	7.7
Delaware	100	9.0	40	6.7	40	13.4	15	*
District of Columbia	82	8.6	6	*	65	13.5	8	*
Florida	1,400	6.2	464	4.5	537	10.8	307	4.8
Georgia	1,024	7.8	330	5.5	574	12.6	102	5.7
Hawaii	108	5.9	24	5.0	7	*	20	7.2
Idaho	106	4.6	89	4.9	–	*	15	*
Illinois	953	6.0	383	4.5	339	12.5	188	5.6
Indiana	611	7.3	396	6.2	135	13.1	65	8.5
Iowa	166	4.2	123	3.8	20	8.0	21	6.1
Kansas	232	5.9	135	4.8	37	12.7	49	7.8
Kentucky	375	6.7	299	6.5	51	9.7	20	6.7
Louisiana	498	7.7	176	5.2	285	11.8	29	6.0
Maine	83	6.6	76	6.6	4	*	1	*
Maryland	490	6.7	130	4.0	267	11.3	62	5.3
Massachusetts	309	4.3	167	3.8	57	8.1	61	4.7
Michigan	744	6.6	369	4.7	280	12.8	77	10.4
Minnesota	360	5.2	199	4.0	94	11.7	25	5.2
Mississippi	356	9.3	131	6.7	214	13.0	1	*
Missouri	490	6.5	314	5.5	144	12.7	19	*
Montana	75	6.0	48	4.7	3	*	7	*
Nebraska	153	5.7	99	5.2	16	*	28	6.6
Nevada	190	5.2	59	4.0	52	11.7	62	4.7
New Hampshire	52	4.2	47	4.3	1	*	3	*
New Jersey	487	4.7	171	3.6	162	10.9	130	4.7
New Mexico	131	5.1	37	5.2	3	*	67	4.6
New York	1,087	4.6	432	3.8	314	8.6	205	3.7
North Carolina	884	7.3	391	5.8	358	12.4	98	5.4
North Dakota	81	7.2	56	6.4	6	*	4	*
Ohio	1,005	7.2	590	5.7	359	15.1	42	6.0
Oklahoma	386	7.3	188	5.7	67	13.4	64	8.6
Oregon	232	5.1	152	4.7	20	15.0	45	5.3
Pennsylvania	862	6.1	467	4.8	255	12.7	94	6.3
Rhode Island	62	5.6	31	4.6	13	*	12	*
South Carolina	405	7.0	164	4.8	211	11.9	23	4.7
South Dakota	90	7.3	53	5.9	6	*	3	*
Tennessee	570	7.0	340	6.1	184	11.0	33	4.5
Texas	2,308	5.7	690	4.9	542	10.9	1,005	5.3
Utah	257	5.1	191	5.0	4	*	47	6.0
Vermont	27	4.6	24	4.5	1	*	1	*
Virginia	612	5.9	259	4.4	241	11.1	71	5.1
Washington	432	4.9	246	4.4	43	9.3	87	5.4
West Virginia	142	7.2	125	6.8	13	*	3	*
Wisconsin	386	5.8	209	4.3	107	15.1	41	6.2
Wyoming	39	5.0	34	5.5	–	*	3	*

See footnotes at end of table.

Table 15. Number of infant deaths and mortality rates, by race and Hispanic origin for United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, and by sex for United States, 2015—Con.

[Rates are infant (under 1 year) deaths per 1,000 live births in specified group. Infant deaths are based on race or Hispanic origin of decedent; live births are based on race or Hispanic origin of mother; see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards; see Technical Notes]

Area and sex	Infant deaths							
	Total[1]		Non-Hispanic white[2]		Non-Hispanic black[2]		Hispanic	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Puerto Rico	218	7.0	–	*	1	*	217	*
Virgin Islands	4	*	–	*	–	*	2	*
Guam	47	14.0	–	*	–	*	–	*
American Samoa	10	*	–	*	–	*	–	*
Northern Marianas	5	*	–	*	–	*	–	*

* Figure does not meet standards of reliability or precision; see Technical Notes.
– Quantity zero.
[1]Includes races and origins not shown separately.
[2]Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.
[3]Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Technical Notes

Nature and sources of data

Data in this report are based on information from all death certificates filed in the 50 states and the District of Columbia, and are processed by the National Center for Health Statistics (NCHS). Data for 2015 are based on records of deaths that occurred during 2015 and were received as of July 22, 2016. Data for earlier years can be obtained via CDC WONDER (4).

The U.S. Standard Certificate of Death, which the states use as a model, was revised in 2003 (32). Prior to 2003, the standard certificate of death had not been revised since 1989 (33). This report includes data for 48 states (Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming) and the District of Columbia that used the 2003 revision of the U.S. Standard Certificate of Death in 2015; and data for the remaining 2 states (Alabama and West Virginia) that collected and reported death data in 2015 based on the 1989 revision of the U.S. Standard Certificate of Death.

Because most of the items presented in this report appear largely comparable despite changes to item wording and format in the 2003 death certificate revision, data from both groups of states are combined unless otherwise stated. Data for American Samoa, Guam, Commonwealth of the Northern Mariana Islands (Northern Marianas), Puerto Rico, and U.S. Virgin Islands are included in tables showing data by state but are not included in U.S. totals. In 2015, Guam, Northern Marianas, Puerto Rico, and Virgin Islands collected and reported death data using the 2003 revision of the U.S. Standard Certificate of Death. American Samoa collected and reported death data in 2015 using the 1989 revision.

Mortality statistics are based on information submitted by the jurisdictions and coded by NCHS through the Vital Statistics Cooperative Program. For the 2015 data year, all states, the District of Columbia, New York City, and Puerto Rico submitted mortality medical data in electronic data files to NCHS. American Samoa, Guam, Northern Marianas, and Virgin Islands submitted copies of death certificates from which NCHS entered and coded all medical data. All states, the District of Columbia, New York City, American Samoa, Puerto Rico, and Virgin Islands submitted mortality demographic data in electronic data files to NCHS. All demographic data for Guam and Northern Marianas were entered and coded by NCHS from copies of death certificates submitted to NCHS.

Data for the entire United States refer to events occurring within the United States. Data shown for geographic areas are by place of residence. Beginning with 1970, mortality statistics for the United States exclude deaths of nonresidents of the United States. All data exclude fetal deaths.

Mortality statistics for American Samoa, Northern Marianas, Puerto Rico, and Virgin Islands exclude deaths of nonresidents for each area. For Guam, however, mortality statistics exclude deaths that occurred to a resident of any place other than Guam or the United States (50 states and the District of Columbia).

Cause-of-death classification

The mortality statistics presented in this report were compiled in accordance with World Health Organization (WHO) regulations, which specify that member countries classify and code causes of death in accordance with the current revision of the *International Classification of Diseases* (ICD). ICD provides the basic guidance used in virtually all countries to code and classify causes of death. Effective with deaths occurring in 1999, the United States began using the Tenth Revision of this classification (ICD–10) (34). For earlier years, causes of death were classified according to the revisions then in use: 1979–1998, Ninth Revision; 1968–1978, Eighth Revision, adapted for use in the United States; 1958–1967, Seventh Revision; and 1949–1957, Sixth Revision.

Changes in classification of causes of death due to these revisions may result in discontinuities in cause-of-death trends. Consequently, cause-of-death comparisons among revisions require consideration of comparability ratios and, where available, estimates of their standard errors. Comparability ratios between the Ninth and Tenth revisions, Eighth and Ninth revisions, Seventh and Eighth revisions, and Sixth and Seventh revisions may be found in other NCHS reports and independent tabulations (35–40).

ICD not only details disease classification but also provides definitions, tabulation lists, the format of the death certificate, and the rules for coding cause of death. Cause-of-death data presented in this publication were coded by procedures outlined in annual issues of the NCHS Instruction Manual (7,41,42). ICD includes rules for selecting the underlying cause of death and regulations on the use of ICD.

Prior to data year 1968, mortality medical data were based on manual coding of an underlying cause of death for each certificate, in accordance with WHO rules. Effective with data year 1968, NCHS converted to computerized coding of the underlying cause and manual coding of all causes (multiple causes) on the death certificate. In this system, called Automated Classification of Medical Entities (ACME) (43), multiple-cause codes are inputted to computer software that uses WHO rules to select the underlying cause. All cause-of-death data in this report are coded using ACME.

The ACME system is used to select the underlying cause of death for all death certificates in the United States. In addition, NCHS developed two computer systems as inputs to ACME. Beginning with 1990 data, the Mortality Medical Indexing, Classification, and Retrieval system (MICAR) (44,45) was introduced to automate the coding of multiple causes of death. In addition, MICAR provides more detailed information on the conditions reported on death certificates than is available through ICD code structure. Beginning with data year 1993, SuperMICAR (46), an enhancement of the MICAR system, was introduced, allowing for literal entry of the multiple cause-of-death text as

reported by the certifier. This information is then automatically processed by the MICAR and ACME computer systems. Records that cannot be automatically processed by MICAR are manually multiple-cause coded and then further processed through ACME to determine the underlying cause of death. In 2015, SuperMICAR (46) was used to process all of the country's death records.

In this report, tabulations of cause-of-death statistics are based solely on the underlying cause of death. The underlying cause is defined by WHO as "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury" (6). The underlying cause is selected from the conditions entered by the medical certifier in the cause-of-death section of the death certificate. When more than one cause or condition is entered by the medical certifier, the underlying cause is determined by the sequence of conditions on the certificate, provisions of ICD, and associated selection rules and modifications. Generally, more medical information is reported on death certificates than is directly reflected in the underlying cause of death. This is captured in NCHS multiple cause-of-death statistics (47–49).

Tabulation lists and cause-of-death ranking

Tabulation lists for ICD–10 are published in NCHS Instruction Manual, Part 9, "ICD–10 Cause-of-Death Lists for Tabulating Mortality Statistics" (updated March 2011 to include WHO updates to ICD–10 for data year 2011) (50). Previously, annual reports of final data presented cause-of-death data based on two tabulation lists: a) "List of 113 Selected Causes of Death" and Enterocolitis due to *Clostridium difficile* (the title of which was modified in 2009 to include Enterocolitis due to *Clostridium difficile*), used for deaths of all ages; and b) "List of 130 Selected Causes of Infant Death," used for infants (50). These lists are used to rank leading causes of death for the two population groups. To streamline cause-of-death information shown in this report, beginning with the 2015 data year, cause-of-death data are presented for only select causes of death. The select causes include all rankable causes as well as other select causes based on public health impact and future planning. However, data for all causes on the "List of 113 Selected Causes of Death" and "List of 130 Selected Causes of Infant Death" are still available through CDC's WONDER system at https://wonder.cdc.gov/. In the list of 113 causes, the group titles of Major cardiovascular diseases (ICD–10 codes I00–I78) and Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) are not ranked. In addition, category titles that begin with the words "other" and "all other" are not ranked to determine the leading causes of death. When one of the titles that represents a subtotal is ranked—for example, Tuberculosis (A16–A19)—its component parts are not ranked, as in this case, Respiratory tuberculosis (A16) and Other tuberculosis (A17–A19). For the list of 130 causes of infant death, the same ranking procedures are used except that the category of Major cardiovascular diseases is not on the list. More detail regarding ranking procedures can be found in "Deaths: Leading Causes for 2015" (2).

Leading cause-of-death trends discussed in this report are based on cause-of-death data according to ICD–10 for 1999–2015 and ICD–9 for the most comparable cause-of-death titles for 1979–1998. Although, in some cases, categories from the "List of 113 Selected Causes of Death" are identical to those in the earlier "List of 72 Selected Causes of Death" used with ICD–9, caution must be used because many of these categories are not comparable even though the cause-of-death titles may be the same. Tables showing ICD–9 categories that are comparable with ICD–10 titles in the "List of 113 Selected Causes of Death" may be found in the reports, "Comparability of Cause of Death Between ICD–9 and ICD–10: Preliminary Estimates" (37) and "Deaths: Final Data for 1999" (51).

Trend data for 1979–1998 that are classified by ICD–9 but sorted into the "List of 113 Selected Causes of Death" developed for ICD–10 are available from the mortality website: https://www.cdc.gov/nchs/data/statab/hist001r.pdf.

Revision of ICD and resulting changes in classification and rules for selecting the underlying cause of death have important implications for the analysis of mortality trends by cause of death. For some causes of death, the discontinuity in trend can be substantial (35,37). Therefore, considerable caution should be used in analyzing cause-of-death trends for periods of time that extend across more than one revision of ICD.

Codes added or deleted in 2015

No ICD–10 codes were added or deleted in data year 2015. Information on categories added or deleted in previous years is available from: https://www.cdc.gov/nchs/data/dvs/Part9InstructionManual2011.pdf (50).

Codes for terrorism

Beginning with data for 2001, NCHS introduced categories *U01–*U03 for classifying and coding deaths due to acts of terrorism. The asterisks before the category codes indicate that they are not part of ICD–10. Deaths classified to the terrorism categories are included in the 113 causes of death list in the categories for Assault (homicide) and Intentional self-harm (suicide), and in the 130 causes of death list for infants in the category for Assault (homicide). Additional information on these new categories is available from: https://www.cdc.gov/nchs/icd/terrorism_code.htm.

In 2015, deaths resulting from the shootings of five persons on two military installations in Chattanooga, Tennessee, were assigned to terrorism categories.

In any given year, it is possible that deaths resulting from acts of terrorism may not be identified as such if: a) information identifying an incident as an act of terrorism is not available to the certifier at the time of certification; b) the certificate is not updated with the information if it later becomes available; or c) official results of the investigation declaring the incident to be an act of terrorism have not yet been made public.

Enterocolitis due to *Clostridium difficile*

The number of deaths from Enterocolitis due to *Clostridium difficile* (*C. difficile*) (ICD–10 code A04.7) was 7,410 in 2015. Deaths from this cause increased dramatically from 793 deaths

in 1999 to a high of 8,085 deaths in 2011. Because of the increasing importance of this cause of death (26,27), beginning with data year 2006, *C. difficile* was added to the list of rankable causes.

Quality of reporting and processing cause of death

Quality of mortality data is largely dependent on proper and thorough completion of death certificates by certifiers. Accuracy and completeness of information entered on death certificates can vary by state from year to year.

One index of the quality of reporting causes of death is the proportion of death certificates coded to Chapter XVIII–Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (ICD–10 codes R00–R99). Although which deaths occur for which underlying causes are impossible to determine, the proportion coded to R00–R99 indicates the consideration given to the cause-of-death statement by the medical certifier. This proportion also may be used as a rough measure of specificity of medical diagnoses made by the certifier in various areas. The percentage of all reported deaths in the United States assigned to Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified, decreased from 1.23% in 2014 to 1.18% in 2015.

Rules for coding a cause or causes of death may sometimes require modification when evidence suggests it will improve the quality of cause-of-death data. Prior to 1999, such modifications were made only when a new ICD revision was implemented. A process for updating ICD was introduced with ICD–10 that allows for midrevision changes. These changes, however, may affect comparability of data between years for selected causes of death.

Detail on coding and classification rule changes can be found in NCHS Instruction Manual Part 2c, "ICD–10 ACME Decision Tables for Classifying Underlying Causes of Death," available from: https://www.cdc.gov/nchs/nvss/instruction_manuals.htm (43). The 2014 version of this manual was used for coding and classifying deaths in 2015. No new coding or classification rule changes occurred in 2015. Trend data for causes of death affected by coding rule changes in previous years should be interpreted with caution.

Rare causes of death

Selected causes of death considered to be of public health concern are supposed to be routinely confirmed by states according to agreed-upon procedures between state vital statistics programs and NCHS. These causes, termed "infrequent and rare causes of death," are listed in the NCHS Instruction Manual, Parts 2a, 11, and 20 (41,52,53). In 2015, some states did not confirm some or all deaths from rare causes.

Codes for drug-induced deaths

Causes of death attributable to drug-induced mortality include ICD–10 codes D52.1, Drug-induced folate deficiency anemia; D59.0, Drug-induced hemolytic anemia; D59.2, Drug-induced nonautoimmune hemolytic anemia; D61.1, Drug-induced aplastic anemia; D64.2, Secondary sideroblastic anemia due to drugs and toxins; E06.4, Drug-induced thyroiditis; E16.0, Drug-induced hypoglycemia without coma; E23.1, Drug-induced hypopituitarism; E24.2, Drug-induced Cushing's syndrome; E27.3, Drug-induced adrenocortical insufficiency; E66.1, Drug-induced obesity; selected codes from the ICD–10 title of Mental and behavioral disorders due to psychoactive substance use, specifically, F11.1–F11.5, F11.7–F11.9, F12.1–F12.5, F12.7–F12.9, F13.1–F13.5, F13.7–F13.9, F14.1–F14.5, F14.7–F14.9, F15.1–F15.5, F15.7–F15.9, F16.1–F16.5, F16.7–F16.9, F17.3–F17.5, F17.7–F17.9, F18.1–F18.5, F18.7–F18.9, F19.1–F19.5, and F19.7–F19.9; G21.1, Other drug-induced secondary parkinsonism; G24.0, Drug-induced dystonia; G25.1, Drug-induced tremor; G25.4, Drug-induced chorea; G25.6, Drug-induced tics and other tics of organic origin; G44.4, Drug-induced headache, not elsewhere classified; G62.0, Drug-induced polyneuropathy; G72.0, Drug-induced myopathy; I95.2, Hypotension due to drugs; J70.2, Acute drug-induced interstitial lung disorders; J70.3, Chronic drug-induced interstitial lung disorders; J70.4, Drug-induced interstitial lung disorder, unspecified; K85.3, Drug-induced acute pancreatitis; L10.5, Drug-induced pemphigus; L27.0, Generalized skin eruption due to drugs and medicaments; L27.1, Localized skin eruption due to drugs and medicaments; M10.2, Drug-induced gout; M32.0, Drug-induced systemic lupus erythematosus; M80.4, Drug-induced osteoporosis with pathological fracture; M81.4, Drug-induced osteoporosis; M83.5, Other drug-induced osteomalacia in adults; M87.1, Osteonecrosis due to drugs; R50.2, Drug-induced fever; R78.1, Finding of opiate drug in blood; R78.2, Finding of cocaine in blood; R78.3, Finding of hallucinogen in blood; R78.4, Finding of other drugs of addictive potential in blood; R78.5, Finding of psychotropic drug in blood; X40–X44, Accidental poisoning by and exposure to drugs, medicaments and biological substances; X60–X64, Intentional self-poisoning (suicide) by and exposure to drugs, medicaments and biological substances; X85, Assault (homicide) by drugs, medicaments and biological substances; and Y10–Y14, Poisoning by and exposure to drugs, medicaments and biological substances, undetermined intent. Drug-induced causes exclude unintentional injuries, homicide, and other causes indirectly related to drug use, as well as newborn deaths associated with the mother's drug use.

Codes for alcohol-induced deaths

Causes of death attributable to alcohol-induced mortality include ICD–10 codes E24.4, Alcohol-induced pseudo-Cushing's syndrome; F10, Mental and behavioral disorders due to alcohol use; G31.2, Degeneration of nervous system due to alcohol; G62.1, Alcoholic polyneuropathy; G72.1, Alcoholic myopathy; I42.6, Alcoholic cardiomyopathy; K29.2, Alcoholic gastritis; K70, Alcoholic liver disease; K85.2, Alcohol-induced acute pancreatitis; K86.0, Alcohol-induced chronic pancreatitis; R78.0, Finding of alcohol in blood; X45, Accidental poisoning by and exposure to alcohol; X65, Intentional self-poisoning by and exposure to alcohol; and Y15, Poisoning by and exposure to alcohol, undetermined intent. Alcohol-induced causes exclude unintentional injuries, homicides, and other causes indirectly

related to alcohol use, as well as newborn deaths associated with maternal alcohol use.

Codes for firearm deaths

Causes of death attributable to firearm mortality include ICD–10 codes *U01.4, Terrorism involving firearms (homicide); W32–W34, Accidental discharge of firearms; X72–X74, Intentional self-harm (suicide) by discharge of firearms; X93–X95, Assault (homicide) by discharge of firearms; Y22–Y24, Discharge of firearms, undetermined intent; and Y35.0, Legal intervention involving firearm discharge. Deaths from injury by firearms exclude deaths due to explosives and other causes indirectly related to firearms.

Race and Hispanic origin

The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races) (32). This change was implemented to reflect the increasing diversity of the U.S. population and to be consistent with the decennial census. The race and ethnicity items on the revised certificate are compliant with the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," issued by the Office of Management and Budget (OMB) (16). This revision replaced standards that were issued in 1977 (54). The new standards mandate the collection of more than one race where applicable for federal data (16). In addition, the new death certificate is compliant with the OMB-mandated minimum set of five races to be reported for federal data (32). Multiple race includes any combination of white, black or African American, American Indian or Alaska Native (AIAN), Asian, and Native Hawaiian or Other Pacific Islander (NHOPI). If two or more specific subgroups such as Korean and Chinese are reported, these count as a single race of Asian rather than as multiple races.

The number of states reporting multiple race has increased, from 7 states in 2003 to 48 states and the District of Columbia in 2015 (Table I). In the 48 states and the District of Columbia that reported multiple race on death certificates in 2015, more than one race was reported for 0.4% of decedents of non-Hispanic origin and for 0.8% of Hispanic origin (Table II). Although still uncommon, multiple races were reported more often for younger decedents than for older decedents (2.8% of decedents under age 25 compared with 0.7% of decedents aged 25–64 and 0.3% of decedents aged 65 and over). In 2015, only two decedents were reported as having more than four races.

Data from vital records based on the 1989 revision of the U.S. Standard Certificate of Death follow the 1977 OMB standard, allowing only a single race to be reported (33,54). The 1977 standard stipulates that states must report a minimum set of four races: white, black or African American, AIAN, and Asian or Pacific Islander (API). Under these standards, data for API persons were collected as a single group; that is, data for Asian persons were not reported separately from NHOPI persons (54). The 1997 OMB guidelines provide for the reporting of Asian persons separately from NHOPI persons (16).

Some death certificates currently collect only one race for the decedent in the same categories as specified in the 1977 OMB guidelines. Therefore, death certificate data by race—the source of the numerators for death rates—are currently incompatible with the population data collected in the 2000 and 2010 censuses, intercensal estimates for 1991–1999 and 2001–2009, and postcensal estimates for 2011–2015—the denominators for the rates. To produce death rates by race, the reported population data for multiple-race persons had to be "bridged" to single-race categories. To provide uniformity and comparability of data during the transition period, before all or most of the data become available in the multiple-race format, the responses of those for whom more than one race was reported (multiple race) must be bridged to a single race. The bridging procedure is similar to that used to bridge multiracial population estimates (17,55). Multiracial decedents are imputed to a single race (white, black, AIAN, or API) according to their combination of races, Hispanic origin, sex, and age indicated on the death certificate. The imputation procedure is described in detail at https://www.cdc.gov/nchs/data/dvs/Multiple_race_documentation_5-10-04.pdf. Similarly, when calculating infant mortality rates, multiracial infants are bridged to a single race. The bridging procedure for multiple-race mothers and fathers is based on the procedure used to bridge the multiple-race population estimates (31); see "Infant mortality rates" in this section.

Race and Hispanic origin are two distinct attributes and are reported separately on the death certificate. Therefore, data shown by Hispanic origin and race are based on a combination of the two attributes for the non-Hispanic population. Data shown for the Hispanic population include persons of any race. Hispanic origin is not imputed if it is not reported.

Quality of race and Hispanic-origin data—Death rates for Hispanic, non-Hispanic AIAN, and non-Hispanic API persons should be interpreted with caution because of inconsistencies in reporting Hispanic origin or race on the death certificate compared with censuses, surveys, and birth certificates. Studies have shown underreporting on death certificates of non-Hispanic AIAN, non-Hispanic API, and Hispanic decedents, as well as undercounts of these groups in censuses (18,19,56,57).

A number of studies have been conducted on the reliability of race and Hispanic origin reported on the death certificate by comparing it with race and Hispanic origin reported on another data collection instrument, such as the census or a survey (18,19,58,59). Inconsistencies may arise because of differences in who provides race and ethnicity information on the compared records. Race and Hispanic-origin information on the death certificate is reported by a funeral director as provided by an informant or, in the absence of an informant, on the basis of observation. In contrast, race and Hispanic origin in the census or the U.S. Census Bureau's American Community Survey (ACS) is obtained while the person is alive; in these cases, race and ethnicity is self-reported or reported by another member of the household familiar with the person and, therefore, may be considered more valid. A high level of agreement between the death certificate and the census or survey report is essential to assure unbiased death rates by race and ethnicity.

Table I. Year that state started reporting multiple race, and year that state began using revised standard certificate of death: Each state, 2003–2015

Area	Year[1] state began reporting multiple race	Year state began using the 2003 standard certificate
Alabama	. . .	. . .
Alaska	2014	2014
Arizona	2010	2010
Arkansas	2008	2008
California	2003	2003
Colorado	2015	2015
Connecticut	2005	2005
Delaware	2007	2007
District of Columbia	[2]2005	[3]2005
Florida	2005	2005
Georgia	2008	2008
Hawaii	2003	2014
Idaho	2003	2003
Illinois	2008	2008
Indiana	2008	2008
Iowa	2011	2011
Kansas	2005	2005
Kentucky	[4]2010	[5]2010
Louisiana	[4]2012	[5]2012
Maine	2003	[6]2010
Maryland	2015	2015
Massachusetts	[7]2014	[8]2014
Michigan	2004	2004
Minnesota	2004	[3]2011
Mississippi	2012	2012
Missouri	2010	2010
Montana	2003	2003
Nebraska	2005	2005
Nevada	2008	2008
New Hampshire	[9]2004	[10]2004
New Jersey	2004	2004
New Mexico	2006	2006
New York	2003	2003
North Carolina	2014	2014
North Dakota	2008	2008
Ohio	2007	2007
Oklahoma	2004	2004
Oregon	2006	2006
Pennsylvania	2012	2012
Rhode Island	2006	2006
South Carolina	2005	2005
South Dakota	2004	2004
Tennessee	2012	2012
Texas	2006	2006
Utah	2005	2005
Vermont	[4]2008	[5]2008
Virginia	[11]2014	[12]2014
Washington	2004	2004
West Virginia	. . .	. . .
Wisconsin	2003	[5]2013
Wyoming	2004	2004

. . . Category not applicable.
[1]Indicates year in which National Center for Health Statistics first received multiple race data from each state, although the state may have begun collecting such data at an earlier date.
[2]Began reporting multiple race in March. [3]Began implementing revised certificate in March. [4]Began reporting multiple race in July. [5]Began implementing revised certificate in July.
[6]Began implementing revised certificate in June. [7]Began implementing revised certificate in September. [8]Began reporting multiple race in September. [9]Began reporting multiple race in mid-April.
[10]Began implementing revised certificate in mid-April. [11]Began reporting multiple race in November. [12]Began implementing revised certificate in November.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Studies (18,57) show that a person self-reported as non-Hispanic AIAN or non-Hispanic API on census or survey records was sometimes reported as non-Hispanic white on the death certificate. Using the National Longitudinal Mortality Study, Arias et al. examined the reliability of race and Hispanic origin reported on 559,007 death certificates compared with that reported on a total of 38 Current Population Surveys (CPS) conducted by the Census Bureau for 1979–2011 (18,19). Agreement between the two sources was found to be excellent for the non-Hispanic white and non-Hispanic black populations, both exhibiting CPS-to-death certificate ratios of 1.00. On the other hand, substantial differences were found for other race and ethnicity groups. The ratio of CPS to death certificates was found to be 1.33 for the non-Hispanic AIAN population and 1.03 for the non-Hispanic API population, indicating net underreporting on death certificates of 33% for non-Hispanic AIAN and 3% for non-Hispanic API. The ratio of deaths for CPS to death certificates for Hispanic persons was found to be 1.03, indicating a net underreporting on death certificates for the Hispanic population of 3%. The net effect of misclassification is an underestimation of deaths and death rates for the non-Hispanic API, non-Hispanic AIAN, and Hispanic populations.

In addition, undercoverage of minority groups in the census and resultant population estimates introduces biases into death rates by race and Hispanic origin (18,19,56–59). Unlike the 1990 census, coverage error in the 2000 census was found to be statistically significant only for the non-Hispanic white population (overcounted by approximately 1.13%) and non-Hispanic black population (undercounted by approximately 1.84%) (58). Overall, the 2010 census coverage error was minor, with a net overcount of 0.01%. The net undercounts were statistically different from zero for the following groups: non-Hispanic black (2.07%), non-Hispanic white (–0.84%), Hispanic (1.54%), and on-reservation AIAN (4.88%) populations. The net undercounts were not statistically different from zero for the non-Hispanic Asian (0.08%), non-Hispanic NHOPI (1.34%), and off-reservation AIAN (–1.95%) populations (60).

Data year 1997 was the first year in which mortality data by Hispanic origin were available for the entire United States.

Other races, race not stated, and Hispanic origin not stated—Beginning in 1992, all records coded as "other races" (0.7% of total deaths in 2015) were assigned to the specified race of the previous record. Records for which race was unknown, not stated, or not classifiable (0.2%) were assigned the racial designation of the previous record. Records for which Hispanic

Table II. Deaths, by race and Hispanic origin: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming, 2015

[By state of occurrence. Data exclude deaths with origin not stated]

Race and origin	Deaths	Percent of non-Hispanic deaths
Non-Hispanic	2,449,589	100.0
One race	2,438,879	99.6
Non-Hispanic white	2,054,840	83.9
Non-Hispanic black	300,946	12.3
Non-Hispanic Asian	59,549	2.4
Non-Hispanic AIAN	16,432	0.7
Non-Hispanic other[1]	4,336	0.2
Non-Hispanic NHOPI	2,776	0.1
Two or more races	10,710	0.4
Two races	10,016	0.4
Non-Hispanic AIAN and non-Hispanic white	4,123	0.2
Non-Hispanic Asian and non-Hispanic white	1,848	0.1
Non-Hispanic black and non-Hispanic white	1,632	0.1
Non-Hispanic Asian and non-Hispanic NHOPI	795	0.0
Non-Hispanic NHOPI and non-Hispanic white	744	0.0
Non-Hispanic black and non-Hispanic AIAN	552	0.0
Non-Hispanic black and non-Hispanic Asian	190	0.0
Non-Hispanic black and non-Hispanic NHOPI	83	0.0
Non-Hispanic AIAN and non-Hispanic Asian	41	0.0
Non-Hispanic AIAN and non-Hispanic NHOPI	8	0.0
Three races	686	0.0
Non-Hispanic Asian, non-Hispanic NHOPI, and non-Hispanic white	437	0.0
Non-Hispanic black, non-Hispanic AIAN, and non-Hispanic white	152	0.0
Non-Hispanic black, non-Hispanic Asian, and non-Hispanic white	27	0.0
Non-Hispanic AIAN, non-Hispanic Asian, and non-Hispanic white	23	0.0
Non-Hispanic AIAN, non-Hispanic NHOPI, and non-Hispanic white	13	0.0
Non-Hispanic black, non-Hispanic NHOPI, and white	11	0.0
Non-Hispanic black, non-Hispanic AIAN, and non-Hispanic Asian	9	0.0
Non-Hispanic black, non-Hispanic Asian, and non-Hispanic NHOPI	7	0.0
Non-Hispanic AIAN, non-Hispanic Asian, and non-Hispanic NHOPI	7	0.0

Race and origin	Deaths	Percent of Hispanic deaths
Hispanic	179,083	100.0
One race	177,598	99.2
Hispanic white	156,120	87.2
Hispanic other[1]	17,907	10.0
Hispanic black	2,316	1.3
Hispanic AIAN	675	0.4
Hispanic Asian	451	0.3
Hispanic NHOPI	129	0.1
Two or more races	1,485	0.8
Two races	1,347	0.8
Hispanic AIAN and Hispanic white	545	0.3
Hispanic Asian and Hispanic white	390	0.2
Hispanic black and Hispanic white	274	0.2
Hispanic NHOPI and Hispanic white	96	0.1
Hispanic Asian and Hispanic NHOPI	15	0.0
Hispanic black and Hispanic AIAN	10	0.0
Hispanic AIAN and Hispanic Asian	8	0.0
Hispanic black and Hispanic Asian	6	0.0
Hispanic AIAN and Hispanic NHOPI	2	0.0
Hispanic black and Hispanic NHOPI	1	0.0
Three races	135	0.1
Hispanic Asian, Hispanic NHOPI, and Hispanic white	97	0.1
Hispanic black, Hispanic AIAN, and Hispanic white	19	0.0
Hispanic black, Hispanic Asian, and Hispanic white	8	0.0
Hispanic AIAN, Hispanic Asian, and Hispanic white	8	0.0
Hispanic black, Hispanic AIAN, and Hispanic Asian	1	0.0
Hispanic black, Hispanic Asian, and Hispanic NHOPI	1	0.0
Hispanic AIAN, Hispanic NHOPI, and Hispanic white	1	0.0

See footnotes at end of table.

Table II. Deaths, by race and Hispanic origin: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming, 2015—Con.

[By state of occurrence. Data exclude deaths with origin not stated]

Race and origin	Deaths	Percent of non-Hispanic deaths
Non-Hispanic—Con.		
Four races	7	0.0
Non-Hispanic AIAN, non-Hispanic Asian, non-Hispanic NHOPI, and non-Hispanic white	5	0.0
Non-Hispanic black, non-Hispanic Asian, non-Hispanic AIAN, and non-Hispanic NHOPI	1	0.0
Non-Hispanic black, non-Hispanic AIAN, non-Hispanic NHOPI, and non-Hispanic white	1	0.0
Five races	1	0.0
Non-Hispanic Asian, non-Hispanic black, non-Hispanic AIAN, non-Hispanic NHOPI, and non-Hispanic white	1	0.0

Race and origin	Deaths	Percent of Hispanic deaths
Hispanic—Con.		
Four races	2	0.0
Hispanic black, Hispanic Asian, Hispanic AIAN, and Hispanic NHOPI	1	0.0
Hispanic black, Hispanic Asian, Hispanic NHOPI, and Hispanic white	1	0.0
Five races	1	0.0
Hispanic Asian, Hispanic black, Hispanic AIAN, Hispanic NHOPI, and Hispanic white	1	0.0

0.0 Quantity more than zero but less than 0.05.

[1]Includes records for which race was reported as "other." Further processing assigns "other" race to one of the recognized categories. "Other" race comprises a wide variety of responses; however, the most common is to check "other" and not provide further specification, or to report a Hispanic group as a race.

NOTE: AIAN is American Indian or Alaska Native, and NHOPI is Native Hawaiian or Other Pacific Islander.

SOURCE: NCHS, National Vital Statistics System, Mortality.

origin was not stated (0.4%) did not have this information imputed.

Infant mortality rates—Infant deaths in this report are tabulated by the race and Hispanic origin of the decedent. Live births, the denominators of infant mortality rates, are tabulated by race and Hispanic origin of mother.

In 2015, multiple race was reported on the revised birth certificates of 49 states, District of Columbia, Guam, and Northern Marianas using the 2003 revision of the U.S. Standard Certificate of Birth. Connecticut was the only state that reported race using the 1989 revision (61).

Infant mortality rates for the Hispanic-origin population are based on numbers of resident infant deaths reported to be of Hispanic origin and numbers of resident live births by Hispanic origin of mother for the United States. In computing infant mortality rates, deaths and live births of unknown origin are not distributed among the specified Hispanic and non-Hispanic groups. In the United States in 2015, the percentage of infant deaths of unknown origin was 1.2%, and the percentage of live births to mothers of unknown origin was 0.8%.

Small numbers of infant deaths for specific Hispanic-origin groups result in infant mortality rates subject to relatively large random variation (see "Random variation").

Infant mortality rates calculated from the general mortality file for specified race and Hispanic origin contain errors because of reporting problems that affect the classification of race and Hispanic origin on the birth and death certificates for the same infant. Infant mortality rates by specified race and Hispanic origin are more accurate when based on the linked file of infant deaths and live births (31). The linked file computes infant mortality rates using the race and Hispanic origin of the mother from the birth certificate in both the numerator and denominator of the rate. In addition, the mother's race and Hispanic origin from the birth certificate are considered to be more accurately reported than the infant's race and Hispanic origin from the death certificate. On the birth certificate, race and Hispanic origin are generally reported by the mother at the time of delivery, whereas on the death certificate, the infant's race and Hispanic origin are reported by an informant, usually the mother but sometimes the funeral director. Estimates of reporting errors have been made by comparing rates based on the linked files with those in which the infant's race and Hispanic origin are based on information from the death certificate (31,56).

Life tables

The life table provides a comprehensive measure of the effect of mortality on life expectancy. It is composed of sets of values showing the mortality experience of a hypothetical group of infants born at the same time and subject throughout their lifetime to the age-specific death rates of a particular time period, usually a given year. Prior to data year 1997, U.S. life tables were abridged and constructed by reference to a standard table (62). In addition, the age range for these life tables was limited to 5-year age groups ending with age group 85 and over. Beginning with final data reported for 1997, complete life tables were constructed by single years of age extending to age 100 (63), using a methodology similar to that of the 1989–1991 decennial life tables (64). The methodology was again revised for data years 2000–2007 using a methodology similar to that of the 1999–2001 decennial life tables (65).

Research into the methodology used for the 1999–2001 decennial life tables, which was applied to the 2000–2007 annual life tables, 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. Beginning with final data reported for 2008 (66), the life table methodology was refined by changing the smoothing technique used to estimate the life table functions at the oldest ages. Beginning with the 2008 data year, the methodology used to produce the life tables does not model the probabilities of death beginning at age 66, but rather at ages above 85 or so. See "United States Life Tables, 2008" for a detailed description of the new methodology (67). Life table data shown in this report for data years 2001–2015 are based on the new methodology. Because life table values presented in this report for 2001–2009 were re-estimated using the new methodology and revised 2001–2009 intercensal population estimates based on the 2010 decennial census (15), the values may differ from those previously published in annual final mortality and life table reports. Life expectancy values in this report for 2013 and 2014 were revised using updated Medicare data; therefore, these values may differ from those previously published. Life expectancy values for 2015 will be revised in future annual reports when updated Medicare data becomes available (3).

Historically, NCHS has produced annual life tables by race including the white and black populations but did not produce life tables for other racial or ethnic groups. Beginning with data year 2006 (originally published elsewhere) (20), NCHS began producing life tables by Hispanic origin, after conducting research into the quality of race and ethnicity reporting on death certificates and developing methodologies to correct for misclassification of these populations on death certificates (18,19). These methods that adjust for misclassification are applied to the production of the life tables, but not to the death rates shown throughout this report. Life tables by race and ethnicity are shown in this report with trend data from 2006 through 2015 (Table 4).

Although the life table methodology used produces complete life tables (by single years of age), the life table data shown in this report are summarized in 5-year age groupings.

Causes of death contributing to changes in life expectancy

A life table partitioning technique was used to estimate causes of death contributing to changes in life expectancy in this report. The method partitions changes into component additive parts and identifies the causes of death having the greatest influence, positive or negative, on changes in life expectancy (68–70).

Injury mortality by mechanism and intent

Injury mortality data are presented using the external cause-of-injury mortality matrix for ICD–10 (Table 11). In this framework, cause-of-injury deaths are organized principally by mechanism (e.g., firearm or poisoning), and secondarily by manner or intent of death (e.g., unintentional, suicide, or homicide).

The number of deaths for selected causes in this framework may differ from those shown in tables that use the standard mortality tabulation lists. Following WHO conventions, standard mortality tabulations (Table 8) present external causes of death (ICD–10 codes *U01–*U03 and V01–Y89); in contrast, the matrix (Tables 11 and I–29) excludes deaths classified as Complications of medical and surgical care (Y40–Y84 and Y88). For additional information on injury data presented in this framework, see the report, "Deaths: Injuries, 2002," available from: https://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_10.pdf (71). Data for later years are available through CDC's WONDER system at https://wonder.cdc.gov/ or through CDC's WISQARS at https://www.cdc.gov/injury/wisqars/index.html. Implementation of changes to ICD–10 may affect the matrix, requiring modification of codes in selected categories. No changes were made to the matrix in 2015. For more information on the latest ICD–10 external cause-of-injury codes included in the matrix, see https://www.cdc.gov/nchs/injury/injury_tools.htm.

Infant mortality

Infant mortality rates are the most commonly used index for measuring the risk of dying during the first year of life. The rates presented in this report are calculated by dividing the number of infant deaths in a calendar year by the number of live births registered for the same period, and are presented as rates per 1,000 or per 100,000 live births. For final birth figures used in the denominator for infant mortality rates, see the report "Births: Final Data for 2015" (61). In contrast to infant mortality rates based on live births, infant death rates are based on the estimated population under age 1 year. Infant death rates that appear in tabulations of age-specific death rates in this report are calculated by dividing the number of infant deaths by the July 1, 2015, population estimate of persons under age 1, based on 2010 census populations. These rates are presented per 100,000 population in this age group. Because of differences in the denominators, infant death rates may differ from infant mortality rates.

There are two sources of infant mortality data: a) the general mortality file, and b) the linked file of live births and infant deaths. Data from the linked file differ from the infant mortality data presented in this report because the linked file includes only those events in which both the birth and the death occur in the United States, and late-filed births. Processing of the linked file allows for further exclusion of infant records due to duplicates and records with additional information that raise questions about an infant's age. Although the differences are usually very small, infant mortality rates based on the linked file tend to be somewhat smaller than those based on data from the general mortality file as presented in this report. The linked file is the preferred source for infant mortality by race because it uses the mother's self-reported race from the child's birth certificate (31), which is more reliable than the infant's race listed on the death certificate, and because the numerator and denominator are referring to the same person's race.

Other variables available online

Hispanic subgroup

Mortality data by Hispanic subgroup no longer appear in the printed version of this report but are available in Table I–4 from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06_tables.pdf.

Marital status

Mortality data by marital status no longer appear in the printed version of this report but are available in Table I–5 from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06_tables.pdf.

Educational attainment

Mortality data by educational attainment no longer appear in the printed version of this report but are available in Internet Tables I–6 and I–7 from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06_tables.pdf.

Injury at work

Mortality data by injury at work are available in Tables I–8 and I–9 from the NCHS website at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06_tables.pdf.

Maternal mortality

Maternal mortality data are not included in this year's report. The 2003 revision of the U.S. Standard Certificate of Death introduced a checkbox question format with categories to take advantage of additional codes available in ICD–10 for deaths with a connection to pregnancy, childbirth, and the puerperium. As states revise their death certificates, most are adopting the checkbox format, resulting in wider adoption of a pregnancy status question nationwide and greater standardization of the particular question used. In 2015, the District of Columbia and all states except West Virginia had a separate question related to pregnancy status of female decedents around the time of their death. The 2003 standard format of the question was used by 46 states and the District of Columbia. Other formats of the question were used by Alabama, California, and Maryland.

Adopting a pregnancy status question consistent with the standard death certificate increases the identification of maternal deaths (72,73). Maternal mortality rates are consistently greater for those states with the additional information from the separate question than for the states without it. In addition, state maternal mortality rates tend to be greater after adopting the standard question than before. Some research on this issue (73–75) indicates that this increase represents an improvement in identifying maternal deaths. For example, a study in Maryland that used multiple data sources as the standard showed an

improvement in identifying maternal deaths (from 62% to 98%) after adoption of a pregnancy checkbox item consistent with the 2003 standard certificate (75). However, growing evidence suggests the pregnancy status question may increase false reporting of recent pregnancy, especially with increasing age (76,77). This may result in overreporting of maternal deaths.

Population bases for computing rates

Populations used for computing death rates and life tables shown in this report represent the population residing in the United States, enumerated as of April 1 for census years and estimated as of July 1 for all other years. Population estimates used to compute death rates for the United States for 2015 are shown for 5-year age groups by race and Hispanic origin in Table III. These estimates are available by single years of age from: https://www.cdc.gov/nchs/nvss/bridged_race.htm (14).

Populations used for computing death rates by state, shown in Table IV, represent state postcensal population estimates based on the 2010 census, estimated as of July 1, 2015 (14). Rates for Puerto Rico are also based on population estimates from the 2010 census as of July 1, 2015, and are provided by the Census Bureau (78). Rates for American Samoa, Guam, Northern Marianas, and Virgin Islands are based on population estimates provided by the Census Bureau's International Data Base (79). Population estimates for each state and territory are not subject to sampling variation because the sources used in demographic analysis are complete counts.

Rates for 2011–2015 are based on postcensal population estimates consistent with the 2010 census, estimated as of July 1 (10–14). Rates for 2010 are based on populations enumerated as of April 1, 2010 (9). Rates for 2001–2009 shown in this report were revised using revised intercensal population estimates based on the 2010 census, estimated as of July 1 (15). Death rates for 2000 are based on populations enumerated as of April 1, 2000 (80). Rates for 1991–1999 are based on intercensal population estimates consistent with the 2000 census levels (81). These estimates were produced under a collaborative arrangement with the Census Bureau and are based on the 2000 census counts by age, race, and sex, modified for consistency with 1977 OMB race categories and historical categories for death data (54,82). The modification procedures are described in detail elsewhere (17,55). The bridged population data are anticipated to be used over the next few years for computing population-based rates by race.

Computing rates

Except for infant mortality rates, rates are on an annual basis per 100,000 estimated population residing in the specified area. Infant mortality rates are per 1,000 or per 100,000 live births. Comparisons made in the text among rates, unless otherwise specified, are statistically significant at the 0.05 level of significance. Lack of comment in this report about any two rates does not mean that the difference was tested and found not to be significant at this level.

Age-adjusted rates (R') are used to compare relative mortality risks among groups and over time. However, they should be viewed as relative indexes rather than as actual measures of mortality risk. They were computed by the direct method—that is, by applying age-specific death rates (R_i) to the U.S. standard population age distribution (Table V), as in

$$R' = \sum_i \frac{P_{si}}{P_s} R_i$$

where P_{si} is the standard population for age group i and P_s the total U.S. standard population (all ages combined).

Beginning with the 1999 data year, NCHS adopted a new population standard for use in age adjusting death rates. Based on the projected year 2000 population of the United States, the new standard replaced the 1940 standard population that had been used for more than 50 years. The new population standard affects levels of mortality and, to some extent, trends and group comparisons. Of particular note are the effects on race mortality comparisons. For detailed discussion, see the report, "Age Standardization of Death Rates: Implementation of the Year 2000 Standard" (83). Beginning with 2003 data, the traditional standard million population along with corresponding standard weights to six decimal places were replaced by the projected year 2000 population age distribution (Table V). The effect of the change is negligible and does not significantly affect comparability with age-adjusted rates calculated using the previous method.

All age-adjusted rates shown in this report are based on the 2000 U.S. standard population.

Age-adjusted rates for Puerto Rico, Guam, American Samoa, and Northern Marianas were computed by applying the age-specific death rates to the U.S. standard population. The 2000 standard population used for computing age-adjusted rates for the territories is shown in Table V.

Using the same standard population, death rates for the total population and for each race–sex group were adjusted separately. The age-adjusted rates were based on 10-year age groups. Age-adjusted death rates are not comparable with crude rates.

Random variation

The mortality data presented in this report, with the exception of data for 1972, are not subject to sampling error. In 1972, mortality data were based on a 50% sample of deaths because of resource constraints. Mortality data, even based on complete counts, may be affected by random variation—that is, the number of deaths that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances (84,85). When the number of deaths is small, perhaps fewer than 100, random variation tends to be relatively large. Therefore, considerable caution must be observed in interpreting statistics based on small numbers of deaths.

Measuring random variability—To quantify the random variation associated with mortality statistics, an assumption must be made regarding the appropriate underlying distribution. Deaths, as infrequent events, can be viewed as deriving from

Table III. Estimated population by 5-year age groups, according to race and Hispanic origin, and sex: United States, 2015

[Populations are postcensal estimates based on 2010 census estimated as of July 1, 2015; see Technical Notes]

Race, Hispanic origin, and sex	Totals	Age group (years)									
		Under 1 year	1–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44
All origins[1]	321,418,820	3,978,038	15,929,243	20,487,176	20,622,330	21,108,903	22,739,313	22,461,554	21,675,648	20,374,585	20,215,198
Male	158,229,297	2,035,134	8,142,467	10,459,132	10,520,388	10,797,867	11,667,854	11,409,399	10,889,739	10,173,424	10,030,153
Female	163,189,523	1,942,904	7,786,776	10,028,044	10,101,942	10,311,036	11,071,459	11,052,155	10,785,909	10,201,161	10,185,045
Non-Hispanic white	201,242,281	2,078,038	8,287,847	10,760,394	11,254,222	11,800,257	12,713,649	12,857,352	12,542,485	11,753,953	11,995,214
Male	99,182,385	1,064,065	4,248,629	5,510,566	5,768,739	6,054,837	6,523,322	6,525,637	6,323,231	5,920,224	6,022,801
Female	102,059,896	1,013,973	4,039,218	5,249,828	5,485,483	5,745,420	6,190,327	6,331,715	6,219,254	5,833,729	5,972,413
Non-Hispanic black	41,777,483	614,972	2,442,213	3,119,315	3,060,962	3,209,944	3,577,790	3,238,537	2,862,385	2,684,835	2,613,588
Male	19,995,887	313,992	1,242,287	1,583,301	1,553,186	1,629,811	1,815,640	1,599,040	1,374,657	1,271,310	1,226,949
Female	21,781,596	300,980	1,199,926	1,536,014	1,507,776	1,580,133	1,762,150	1,639,497	1,487,728	1,413,525	1,386,639
Non-Hispanic American Indian or Alaska Native	2,689,706	40,950	160,208	206,560	204,885	211,216	228,258	206,661	183,470	166,297	159,991
Male	1,320,413	20,858	81,554	104,201	103,670	107,135	116,393	104,367	90,706	82,072	78,351
Female	1,369,293	20,092	78,654	102,359	101,215	104,081	111,865	102,294	92,764	84,225	81,640
Non-Hispanic Asian or Pacific Islander	19,116,557	219,985	919,528	1,169,179	1,175,527	1,171,680	1,406,503	1,627,527	1,635,547	1,526,274	1,513,862
Male	9,127,211	112,823	470,827	594,704	590,124	592,163	714,197	795,478	775,530	712,983	709,691
Female	9,989,346	107,162	448,701	574,475	585,403	579,517	692,306	832,049	860,017	813,291	804,171
Hispanic	56,592,793	1,024,093	4,119,447	5,231,728	4,926,734	4,715,806	4,813,113	4,531,477	4,451,761	4,243,226	3,932,543
Male	28,603,401	523,396	2,099,170	2,666,360	2,504,669	2,413,921	2,498,302	2,384,877	2,325,615	2,186,835	1,992,361
Female	27,989,392	500,697	2,020,277	2,565,368	2,422,065	2,301,885	2,314,811	2,146,600	2,126,146	2,056,391	1,940,182

Race, Hispanic origin, and sex	Age group (years)								
	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85 and over
All origins[1]	20,853,844	22,334,317	21,807,942	19,069,877	16,067,468	11,483,049	8,123,833	5,799,341	6,287,161
Male	10,334,929	10,963,847	10,597,567	9,117,180	7,596,190	5,296,158	3,610,906	2,412,665	2,174,298
Female	10,518,915	11,370,470	11,210,375	9,952,697	8,471,278	6,186,891	4,512,927	3,386,676	4,112,863
Non-Hispanic white	13,216,978	15,124,694	15,476,050	14,053,810	12,264,429	8,944,691	6,349,116	4,623,786	5,145,316
Male	6,609,912	7,489,701	7,603,227	6,814,088	5,890,546	4,194,407	2,869,856	1,957,509	1,791,088
Female	6,607,066	7,634,993	7,872,823	7,239,722	6,373,883	4,750,284	3,479,260	2,666,277	3,354,228
Non-Hispanic black	2,636,569	2,758,755	2,596,670	2,092,247	1,572,257	1,038,028	718,463	474,295	465,658
Male	1,240,517	1,291,152	1,200,683	938,589	686,820	434,557	284,937	171,131	137,328
Female	1,396,052	1,467,603	1,395,987	1,153,658	885,437	603,471	433,526	303,164	328,330
Non-Hispanic American Indian or Alaska Native	163,596	179,969	170,182	137,559	106,143	68,676	44,597	26,551	23,937
Male	79,484	86,317	80,087	64,404	50,006	31,722	19,727	10,841	8,518
Female	84,112	93,652	90,095	73,155	56,137	36,954	24,870	15,710	15,419
Non-Hispanic Asian or Pacific Islander	1,341,373	1,226,516	1,113,206	947,866	767,062	517,007	365,941	239,151	232,823
Male	628,159	572,473	511,691	425,497	342,482	231,360	162,920	98,809	85,300
Female	713,214	654,043	601,515	522,369	424,580	285,647	203,021	140,342	147,523
Hispanic	3,495,328	3,044,383	2,451,834	1,838,395	1,357,577	914,647	645,716	435,558	419,427
Male	1,776,857	1,524,204	1,201,879	874,602	626,336	404,112	273,466	174,375	152,064
Female	1,718,471	1,520,179	1,249,955	963,793	731,241	510,535	372,250	261,183	267,363

[1]Includes origin not stated.

SOURCE: NCHS, estimates of July 1, 2015, U.S. resident population by age, sex, race, and Hispanic origin prepared under collaborative arrangement with U.S. Census Bureau, 2016.

Table IV. Estimated population for United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, 2015

[Populations are postcensal estimates based on 2010 census, estimated as of July 1, 2015]

Area	Total	Area	Total
United States	321,418,820	Nevada	2,890,845
Alabama	4,858,979	New Hampshire	1,330,608
Alaska	738,432	New Jersey	8,958,013
Arizona	6,828,065	New Mexico	2,085,109
Arkansas	2,978,204	New York	19,795,791
California	39,144,818	North Carolina	10,042,802
Colorado	5,456,574	North Dakota	756,927
Connecticut	3,590,886	Ohio	11,613,423
Delaware	945,934	Oklahoma	3,911,338
District of Columbia	672,228	Oregon	4,028,977
Florida	20,271,272	Pennsylvania	12,802,503
Georgia	10,214,860	Rhode Island	1,056,298
Hawaii	1,431,603	South Carolina	4,896,146
Idaho	1,654,930	South Dakota	858,469
Illinois	12,859,995	Tennessee	6,600,299
Indiana	6,619,680	Texas	27,469,114
Iowa	3,123,899	Utah	2,995,919
Kansas	2,911,641	Vermont	626,042
Kentucky	4,425,092	Virginia	8,382,993
Louisiana	4,670,724	Washington	7,170,351
Maine	1,329,328	West Virginia	1,844,128
Maryland	6,006,401	Wisconsin	5,771,337
Massachusetts	6,794,422	Wyoming	586,107
Michigan	9,922,576		
Minnesota	5,489,594	Puerto Rico	3,474,182
Mississippi	2,992,333	Virgin Islands	103,574
Missouri	6,083,672	Guam	161,785
Montana	1,032,949	American Samoa	54,343
Nebraska	1,896,190	Northern Marianas	52,344

SOURCES: NCHS, Vintage 2015 bridged-race postcensal population estimates (available from: https://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm); U.S. Census Bureau, Population Division, Annual estimates of the resident population by single year of age and sex: April 1, 2010 to July 1, 2015 (available from: https://factfinder2.census.gov/bkmk/table/1.0/en/PEP/2015/PEPSYASEX/0400000US72); and International data base, 2015 (available from: https://www.census.gov/population/international/data/idb/informationGateway.php).

Table V. U.S. standard population

Age group (years)	Population
All ages	274,633,642
Under 1 year	3,794,901
1–4	15,191,619
5–14	39,976,619
15–24	38,076,743
25–34	37,233,437
35–44	44,659,185
45–54	37,030,152
55–64	23,961,506
65–74	18,135,514
75–84	12,314,793
85 and over	4,259,173

SOURCE: NCHS, National Vital Statistics System, Mortality.

a Poisson probability distribution. The Poisson distribution is simple conceptually and computationally, and provides reasonable, conservative variance estimates for mortality statistics when the probability of dying is relatively low (84). Using the properties of the Poisson distribution, the standard error (SE) associated with the number of deaths (D) is

$$SE(D) = \sqrt{\text{var}(D)} = \sqrt{D} \quad [1]$$

where var*(D)* denotes the variance of *D*.

The SE associated with crude and age-specific death rates (R) assumes that the population denominator (P) is a constant and is

$$SE(R) = \sqrt{\text{var}\left(\frac{D}{P}\right)} = \sqrt{\frac{1}{P^2}\text{var}(D)} = \sqrt{\frac{D}{P^2}} = \frac{R}{\sqrt{D}} \quad [2]$$

The coefficient of variation or relative standard error (RSE) is a useful measure of relative variation. The RSE is calculated by dividing the statistic (e.g., number of deaths or death rate) into its SE and multiplying by 100. For the number of deaths,

$$RSE(D) = 100\frac{SE(D)}{D} = 100\frac{\sqrt{D}}{D} = 100\sqrt{\frac{1}{D}}$$

For crude and age-specific death rates,

$$RSE(R) = 100\frac{SE(R)}{R} = 100\frac{R/\sqrt{D}}{R} = 100\sqrt{\frac{1}{D}}$$

Thus,

$$\mathrm{RSE}(D) = \mathrm{RSE}(R) = 100\sqrt{\frac{1}{D}} \qquad [3]$$

The SE of the age-adjusted death rate (R') is

$$\mathrm{SE}(R') = \sqrt{\sum_i \left(\frac{P_{si}}{P_s}\right)^2 \mathrm{var}(R_i)} = \sqrt{\sum_i \left\{\left(\frac{P_{si}}{P_s}\right)^2 \left(\frac{R_i^2}{D_i}\right)\right\}} \qquad [4]$$

where:

- R_i is the age-specific rate for the ith age group.
- P_{si} is the age-specific standard population for the ith age group from the U.S. standard population age distribution (see Table V and *Age-adjusted death rate* in the following "Definition of terms").
- P_s is the total U.S. standard population (all ages combined).
- D_i is the number of deaths for the ith age group.

RSE for the age-adjusted rate, RSE(R'), is calculated by dividing SE(R') from Formula 4 by the age-adjusted death rate, R', and multiplying by 100, as in

$$\mathrm{RSE}(R') = 100\frac{\mathrm{SE}(R')}{R'}$$

For tables showing infant mortality rates based on live births (B) in the denominator, calculation of SE assumes random variability in both the numerator and denominator. SE for the infant mortality rate (*IMR*) is:

$$\mathrm{SE}(IMR) = \sqrt{\frac{\mathrm{var}(D) + IMR \bullet \mathrm{var}(B)}{E(B)^2}} = \sqrt{\frac{D}{B^2} + \frac{D^2}{B^3}} \qquad [5]$$

where the number of births, B, is also assumed to be distributed according to a Poisson distribution, and E(B) is the expectation of B.

RSE for *IMR* is

$$\mathrm{RSE}(IMR) = 100\frac{\mathrm{SE}(IMR)}{IMR} = 100\sqrt{\frac{1}{D} + \frac{1}{B}} \qquad [6]$$

Formulas 1–6 may be used for all tables presented in this report except for death rates and age-adjusted death rates shown in Tables I–4 through I–6, which are calculated using population figures that are subject to sampling error.

Suppression of unreliable rates—Beginning with 1989 data, an asterisk is shown in place of a crude or age-specific death rate based on fewer than 20 deaths, the equivalent of an RSE of 23% or more. The limit of 20 deaths is a convenient, if somewhat arbitrary, benchmark, below which rates are considered to be too statistically unreliable for presentation. For infant mortality rates, the same threshold of fewer than 20 deaths is used to determine whether an asterisk is presented in place of the rate. For age-adjusted death rates, the suppression criterion is based on the sum of age-specific deaths; that is, if the sum of the age-specific deaths is less than 20, an asterisk replaces the rate.

Confidence intervals and statistical tests based on 100 deaths or more—When the number of deaths is large, a normal approximation may be used in calculating confidence intervals and statistical tests. How large, in terms of number of deaths, is to some extent subjective. In general, for crude and age-specific death rates and for infant mortality rates, the normal approximation performs well when the number of deaths is 100 or greater. For age-adjusted rates, the criterion for use of the normal approximation is somewhat more complicated (5,83,85). Formula 7 is used to calculate 95% confidence limits for the death rate when the normal approximation is appropriate:

$$L(R) = R - 1.96(SE(R)) \text{ and } U(R) = R + 1.96(SE(R)) \qquad [7]$$

where L(R) and U(R) are the lower and upper limits of the confidence interval, respectively. The resulting 95% confidence interval can be interpreted to mean that the chances are 95 in 100 that the "true" death rate falls between L(R) and U(R). For example, suppose that the crude death rate for Malignant neoplasms is 186.0 per 100,000 population based on 565,469 deaths. Lower and upper 95% confidence limits using Formula 7 are calculated as

$$L(186.0) = 186.0 - 1.96(0.25) = 185.5$$

and

$$U(186.0) = 186.0 + 1.96(0.25) = 186.5$$

Thus, the chances are 95 in 100 that the true death rate for Malignant neoplasms is between 185.5 and 186.5. Formula 7 can also be used to calculate 95% confidence intervals for the number of deaths, age-adjusted death rates, infant mortality rates, and other mortality statistics when the normal approximation is appropriate by replacing R with D, R', *IMR*, or others.

When testing the difference between two rates, R_1 and R_2 (each based on 100 or more deaths), the normal approximation may be used to calculate a test statistic, z, such that

$$z = \frac{R_1 - R_2}{\sqrt{\mathrm{SE}(R_1)^2 + \mathrm{SE}(R_2)^2}} \qquad [8]$$

If $|z| \geq 1.96$, then the difference between the rates is statistically significant at the 0.05 level. If $|z| < 1.96$, then the difference is not statistically significant. Formula 8 can also be used to perform tests for other mortality statistics when the normal approximation is appropriate (when both statistics being compared meet the normal criteria) by replacing R_1 and R_2 with D_1 and D_2, R'_1 and R'_2, or others. For example, suppose that the male age-adjusted death rate for Malignant neoplasms of trachea, bronchus, and lung (lung cancer) is 65.1 per 100,000 U.S. standard population in the previous data year (R_1) and 63.6 per 100,000 U.S. standard population in the current data year (R_2). SE for each of these figures, SE(R_1) and SE(R_2), is calculated using Formula 4. A test using Formula 8 can determine if the decrease in the age-adjusted rate is statistically significant:

$$z = \frac{65.1 - 63.6}{\sqrt{(0.222)^2 + (0.217)^2}} = 4.83$$

Because $z = 4.83 > 1.96$, the decrease from the previous data year to the current data year in the male age-adjusted death rate for lung cancer is statistically significant.

Confidence intervals and statistical tests based on fewer than 100 deaths—When the number of deaths is not large (fewer than 100), the Poisson distribution cannot be approximated by the normal distribution. The normal distribution is symmetrical, with a range from $-\infty$ to $+\infty$. As a result, confidence intervals based on the normal distribution also have this range. The number of deaths or the death rate, however, cannot be less than zero. When the number of deaths is very small, approximating confidence intervals for deaths and death rates using the normal distribution will sometimes produce lower confidence limits that are negative. The Poisson distribution, in contrast, is an asymmetric distribution with zero as a lower bound—confidence limits based on this distribution will never be less than zero. A simple method based on the more general family of gamma distributions, of which the Poisson is a member, can be used to approximate confidence intervals for deaths and death rates when the number of deaths is small (83,85). For more information regarding how the gamma method is derived, see "*Derivation of gamma method*" at the end of this section.

Calculations using the gamma method can be made using commonly available spreadsheet programs or statistical software (e.g., Excel or SAS) that include an inverse gamma function. In Excel, the function "gammainv (probability, alpha, beta)" returns values associated with the inverse gamma function for a given probability between 0 and 1. For 95% confidence limits, the probability associated with the lower limit is 0.05/2 = 0.025, and with the upper limit, 1 – (0.05/2) = 0.975. Alpha and beta are parameters associated with the gamma distribution. For the number of deaths and crude and age-specific death rates, alpha = D (the number of deaths) and beta = 1. In Excel, the following formulas can be used to calculate lower and upper 95% confidence limits for the number of deaths and crude and age-specific death rates:

$$L(D) = \text{GAMMAINV}(0.025, D, 1)$$

and

$$U(D) = \text{GAMMAINV}(0.975, D + 1, 1)$$

Confidence limits for the death rate are then calculated by dividing $L(D)$ and $U(D)$ by the population (P) at risk of dying (see Formula 15).

Alternatively, 95% confidence limits can be estimated using the lower and upper confidence limit factors shown in Table VI. For the number of deaths, D, and the death rate, R,

$$L(D) = L \times D \text{ and } U(D) = U \times D \quad [9]$$

$$L(R) = L \times R \text{ and } U(R) = U \times R \quad [10]$$

where L and U in both formulas are the lower and upper confidence limit factors that correspond to the appropriate number of deaths, D, in Table VI. For example, suppose that the death rate for non-Hispanic AIAN females aged 1–4 years is 39.5 per 100,000 and based on 50 deaths. Applying Formula 10, values for L and U from Table VI for 50 deaths are multiplied by the death rate, 39.5, such that

$$L(R) = L(39.5) = 0.742219 \times 39.5 = 29.3$$

and

$$U(R) = U(39.5) = 1.318375 \times 39.5 = 52.1$$

These confidence limits indicate that the chances are 95 in 100 that the actual death rate for non-Hispanic AIAN females aged 1–4 is between 29.3 and 52.1 per 100,000.

Although the calculations are similar, confidence intervals based on small numbers for age-adjusted death rates, infant mortality rates, and rates that are subject to sampling variability in the denominator are somewhat more complicated (5,85).

Refer to the most recent version of the Mortality Technical Appendix for more details at: https://www.cdc.gov/nchs/products/vsus/ta.htm.

When comparing the difference between two rates (R_1 and R_2), where one or both of the rates are based on fewer than 100 deaths, a comparison of 95% confidence intervals may be used as a statistical test. If the 95% confidence intervals do not overlap, then the difference can be said to be statistically significant at the 0.05 level. A simple rule of thumb is: If $R_1 > R_2$, then test if $L(R_1) > U(R_2)$, or if $R_2 > R_1$, then test if $L(R_2) > U(R_1)$. Positive tests denote statistical significance at the 0.05 level. For example, suppose that non-Hispanic AIAN females aged 1–4 have a death rate (R_1) of 39.5 based on 50 deaths, and non-Hispanic API females aged 1–4 have a death rate (R_2) of 20.1 per 100,000 based on 86 deaths. The 95% confidence limits for R_1 and R_2 calculated using Formula 10 would be

$$L(R_1) = L(39.5) = 0.742219 \times 39.5 = 29.3$$

and

$$U(R_1) = U(39.5) = 1.318375 \times 39.5 = 52.1$$

$$L(R_2) = L(20.1) = 0.799871 \times 17.9 = 16.1$$

and

$$U(R_2) = U(20.1) = 1.234992 \times 17.9 = 24.8$$

Because $R_1 > R_2$ and $L(R_1) > U(R_2)$, it can be concluded that the difference between the death rates for non-Hispanic AIAN females aged 1–4 and non-Hispanic API females of the same age is statistically significant at the 0.05 level. That is, taking into account random variability, non-Hispanic API females aged 1–4 have a death rate significantly lower than that for non-Hispanic AIAN females of the same age.

This test may also be used to perform tests for other statistics when the normal approximation is not appropriate for one or both of the statistics being compared, by replacing R_1 and R_2 with D_1 and D_2, R'_1 and R'_2, or others.

Users of the method of comparing confidence intervals should be aware that this method is a conservative test for statistical significance—the difference between two rates may, in fact, be statistically significant even though confidence intervals for the two rates overlap (86). Caution should be observed

Table VI. Lower and upper 95% confidence limit factors for the number of deaths and death rate when number of deaths is less than 100

Number of deaths (*D*)	Lower confidence limit (*L*)	Upper confidence limit (*U*)	Number of deaths (*D*)	Lower confidence limit (*L*)	Upper confidence limit (*U*)
1	0.025	5.572	51	0.745	1.315
2	0.121	3.612	52	0.747	1.311
3	0.206	2.922	53	0.749	1.308
4	0.272	2.560	54	0.751	1.305
5	0.325	2.334	55	0.753	1.302
6	0.367	2.177	56	0.755	1.299
7	0.402	2.060	57	0.757	1.296
8	0.432	1.970	58	0.759	1.293
9	0.457	1.898	59	0.761	1.290
10	0.480	1.839	60	0.763	1.287
11	0.499	1.789	61	0.765	1.285
12	0.517	1.747	62	0.767	1.282
13	0.532	1.710	63	0.768	1.279
14	0.547	1.678	64	0.770	1.277
15	0.560	1.649	65	0.772	1.275
16	0.572	1.624	66	0.773	1.272
17	0.583	1.601	67	0.775	1.270
18	0.593	1.580	68	0.777	1.268
19	0.602	1.562	69	0.778	1.266
20	0.611	1.544	70	0.780	1.263
21	0.619	1.529	71	0.781	1.261
22	0.627	1.514	72	0.782	1.259
23	0.634	1.500	73	0.784	1.257
24	0.641	1.488	74	0.785	1.255
25	0.647	1.476	75	0.787	1.254
26	0.653	1.465	76	0.788	1.252
27	0.659	1.455	77	0.789	1.250
28	0.664	1.445	78	0.790	1.248
29	0.670	1.436	79	0.792	1.246
30	0.675	1.428	80	0.793	1.245
31	0.679	1.419	81	0.794	1.243
32	0.684	1.412	82	0.795	1.241
33	0.688	1.404	83	0.796	1.240
34	0.693	1.397	84	0.798	1.238
35	0.697	1.391	85	0.799	1.237
36	0.700	1.384	86	0.800	1.235
37	0.704	1.378	87	0.801	1.233
38	0.708	1.373	88	0.802	1.232
39	0.711	1.367	89	0.803	1.231
40	0.714	1.362	90	0.804	1.229
41	0.718	1.357	91	0.805	1.228
42	0.721	1.352	92	0.806	1.226
43	0.724	1.347	93	0.807	1.225
44	0.727	1.342	94	0.808	1.224
45	0.729	1.338	95	0.809	1.222
46	0.732	1.334	96	0.810	1.221
47	0.735	1.330	97	0.811	1.220
48	0.737	1.326	98	0.812	1.219
49	0.740	1.322	99	0.813	1.217
50	0.742	1.318			

SOURCE: NCHS, National Vital Statistics System, Mortality.

when interpreting a nonsignificant difference between two rates, especially when the lower and upper limits being compared overlap only slightly.

Derivation of gamma method—For a random variable X that follows a gamma distribution $\Gamma(y,z)$, where y and z are the parameters that determine the shape of the distribution (87), $E(X) = yz$ and $Var(X) = yz^2$. For the number of deaths, D, $E(D) = D$ and $Var(D) = D$. It follows that $y = D$ and $z = 1$, and thus,

$$D \sim \Gamma(D,1) \qquad [11]$$

From Equation 11, it is clear that the shape of the distribution of deaths depends only on the number of deaths.

For the death rate, R, $E(R) = R$ and $Var(R) = D/P^2$. It follows, in this case, that $y = D$ and $z = P^{-1}$, and thus,

$$R \sim \Gamma(D,P^{-1}) \qquad [12]$$

A useful property of the gamma distribution is that for $X \sim \Gamma(y,z)$, X can be divided by z such that $X/z \sim \Gamma(y,1)$. This converts the gamma distribution into a simplified, standard form, dependent only on parameter y. Expressing Equation 12 in its simplified form gives:

$$R/P^{-1} = D \sim \Gamma(D,1) \qquad [13]$$

From Equation 13, it is clear that the shape of the distribution of the death rate is also dependent solely on the number of deaths.

Using the results of Equations 11 and 13, the inverse gamma distribution can be used to calculate upper and lower confidence limits. Lower and upper $100(1 - \alpha)$ percent confidence limits for the number of deaths, $L(D)$ and $U(D)$, are estimated as

$$L(D) = \Gamma^{-1}_{(D,1)}(\alpha / 2) \text{ and } U(D) = \Gamma^{-1}_{(D+1,1)}(1 - \alpha /2) \qquad [14]$$

where Γ^{-1} represents the inverse of the gamma distribution and $D + 1$ in the formula for $U(D)$ reflects a continuity correction, which is necessary because D is a discrete random variable and the gamma distribution is a continuous distribution. For a 95% confidence interval, $\alpha = 0.05$. For the death rate, it can be shown that

$$L(R) = L(D)/P \text{ and } U(R) = U(D)/P \qquad [15]$$

For more detail regarding the derivation of the gamma method and its application to age-adjusted death rates and other mortality statistics, see References (5,83,85).

Availability of mortality data

Mortality data are available in publications, unpublished tables, and electronic products as described on the NCHS mortality website at: https://www.cdc.gov/nchs/deaths.htm. More detailed analysis than this report provides can be obtained from the mortality public-use data set issued each data year. Since 1968, the data set has been available through NCHS in ASCII format and can now be downloaded from https://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm. Additional resources available from NCHS include *Vital Statistics of the United States*, *Mortality*; *Vital and Health Statistics,* Series 20 reports; and *National Vital Statistics Reports*.

Definition of terms

Age-adjusted death rate—The death rate used to make comparisons of relative mortality risks across groups and over time. This rate should be viewed as a construct or an index rather than a direct or actual measure of mortality risk. Statistically, it is a weighted average of age-specific death rates, where the weights represent the fixed population proportions by age.

Age-specific death rate—Deaths per 100,000 population in a specified age group, such as 1–4 or 5–9 years, for a specified period.

Crude death rate—Total deaths per 100,000 population for a specified period. This rate represents the average chance of dying during a specified period for persons in the entire population.

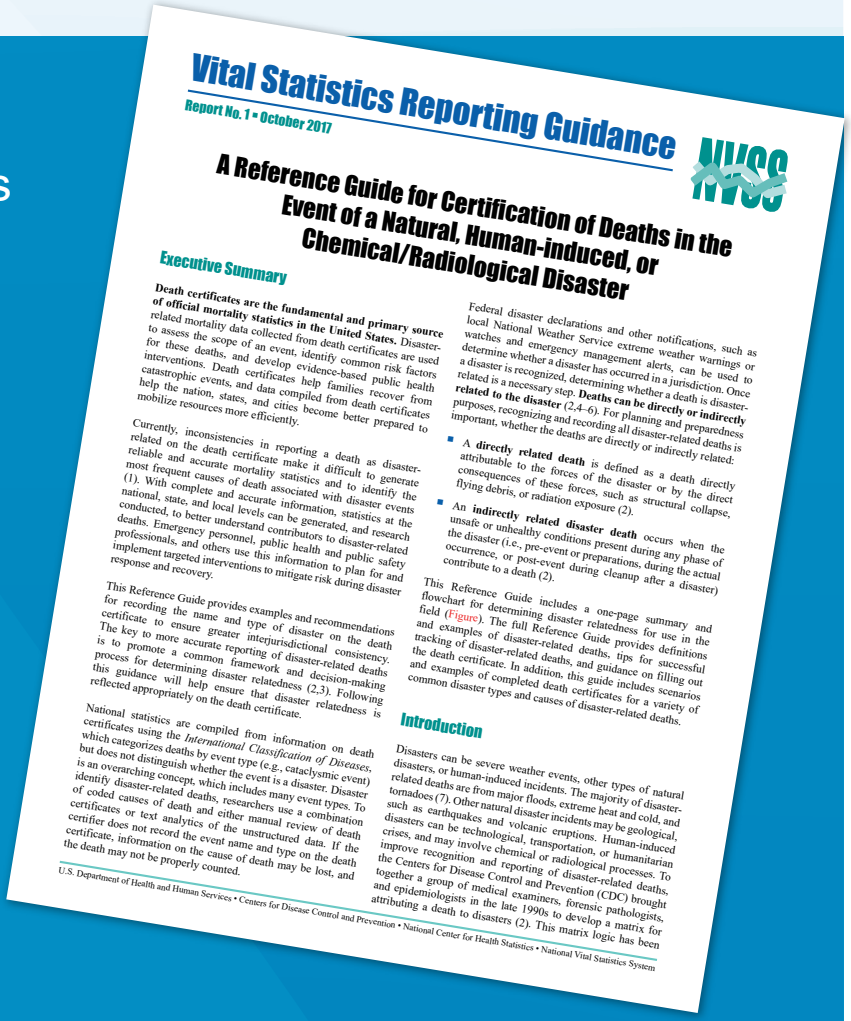
Infant deaths—Deaths of infants under age 1 year.

Neonatal deaths—Deaths of infants aged 0–27 days.

Postneonatal deaths—Deaths of infants aged 28 days–11 months.

Vital Statistics Reporting Guidance

- Offering resources for those who report births and deaths
- With instructions on reporting events, sample scenarios, and examples of completed certificates
- Helping to improve the quality of vital statistics to enhance public health



Vital Statistics Reporting Guidance

Report No. 1 • October 2017

NVSS

A Reference Guide for Certification of Deaths in the Event of a Natural, Human-induced, or Chemical/Radiological Disaster

Executive Summary

Death certificates are the fundamental and primary source of official mortality statistics in the United States. Disaster-related mortality data collected from death certificates are used to assess the scope of an event, identify common risk factors for these deaths, and develop evidence-based public health interventions. Death certificates help families recover from catastrophic events, and data compiled from death certificates help the nation, states, and cities become better prepared to mobilize resources more efficiently.

Currently, inconsistencies in reporting a death as disaster-related on the death certificate make it difficult to generate reliable and accurate mortality statistics and to identify the most frequent causes of death associated with disaster events (1). With complete and accurate information, statistics at the national, state, and local levels can be generated, and research conducted, to better understand contributors to disaster-related deaths. Emergency personnel, public health and public safety professionals, and others use this information to plan for and implement targeted interventions to mitigate risk during disaster response and recovery.

This Reference Guide provides examples and recommendations for recording the name and type of disaster on the death certificate to ensure greater interjurisdictional consistency. The key to more accurate reporting of disaster-related deaths is to promote a common framework and decision-making process for determining disaster relatedness (2,3). Following this guidance will help ensure that disaster relatedness is reflected appropriately on the death certificate.

National statistics are compiled from information on death certificates using the *International Classification of Diseases*, which categorizes deaths by event type (e.g., cataclysmic event) but does not distinguish whether the event is a disaster. Disaster is an overarching concept, which includes many event types. To identify disaster-related deaths, researchers use a combination of coded causes of death and either manual review of death certificates or text analytics of the unstructured data. If the certifier does not record the event name and type on the death certificate, information on the cause of death may be lost, and the death may not be properly counted.

Federal disaster declarations and other notifications, such as local National Weather Service extreme weather warnings or watches and emergency management alerts, can be used to determine whether a disaster has occurred in a jurisdiction. Once a disaster is recognized, determining whether a death is disaster-related is a necessary step. **Deaths can be directly or indirectly related to the disaster** (2,4–6). For planning and preparedness purposes, recognizing and recording all disaster-related deaths is important, whether the deaths are directly or indirectly related:

- A **directly related death** is defined as a death directly attributable to the forces of the disaster or by the direct consequences of these forces, such as structural collapse, flying debris, or radiation exposure (2).
- An **indirectly related disaster death** occurs when the unsafe or unhealthy conditions present during any phase of the disaster (i.e., pre-event or preparations, during the actual occurrence, or post-event during cleanup after a disaster) contribute to a death (2).

This Reference Guide includes a one-page summary and flowchart for determining disaster relatedness for use in the field (Figure). The full Reference Guide provides definitions and examples of disaster-related deaths, tips for successful tracking of disaster-related deaths, and guidance on filling out the death certificate. In addition, this guide includes scenarios and examples of completed death certificates for a variety of common disaster types and causes of disaster-related deaths.

Introduction

Disasters can be severe weather events, other types of natural disasters, or human-induced incidents. The majority of disaster-related deaths are from major floods, extreme heat and cold, and tornadoes (7). Other natural disaster incidents may be geological, such as earthquakes and volcanic eruptions. Human-induced disasters can be technological, transportation, or humanitarian crises, and may involve chemical or radiological processes. To improve recognition and reporting of disaster-related deaths, the Centers for Disease Control and Prevention (CDC) brought together a group of medical examiners, forensic pathologists, and epidemiologists in the late 1990s to develop a matrix for attributing a death to disasters (2). This matrix logic has been

U.S. Department of Health and Human Services • Centers for Disease Control and Prevention • National Center for Health Statistics • National Vital Statistics System

For more information, visit:
https://www.cdc.gov/nchs/nvss/reporting-guidance.htm

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Contents

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