Deaths: Final Data for 2022

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Abstract

Objectives—This report presents final 2022 data on U.S. deaths, death rates, life expectancy, infant and maternal 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 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 according to the *International Classification of Diseases, 10th Revision*. Beginning in 2018, all states and the District of Columbia were using the 2003 revised certificate of death for the entire year, which includes the 1997 Office of Management and Budget revised standards for race. Data based on these revised standards are not completely comparable to previous years.

Results—In 2022, a total of 3,279,857 deaths were reported in the United States. The age-adjusted death rate was 798.8 deaths per 100,000 U.S. standard population, a decrease of 9.2% from the 2021 rate. Life expectancy at birth was 77.5 years, an increase of 1.1 years from 2021. Age-specific death rates decreased from 2021 to 2022 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older and increased for age groups 1–4 and 5–14. In 2022, the 10 leading causes of death remained the same as in 2021, although four causes changed rank. Heart disease remained the top leading cause, followed by cancer. The infant mortality rate, 5.60 deaths per 1,000 live births in 2022, increased 2.9% from the rate in 2021 (5.44).

Conclusions—In 2022, the age-adjusted death rate decreased and life expectancy at birth increased for the total, male, and female populations, primarily due to the decrease in deaths from COVID-19.

Keywords: mortality • cause of death • life expectancy • National Vital Statistics System

Highlights

Mortality experience in 2022

- In 2022, a total of 3,279,857 resident deaths were registered in the United States, a decrease of 184,374 deaths compared with 2021 (3,464,231). The 1-year decrease in the number of deaths was primarily driven by the decrease in deaths from COVID-19.
- The crude death rate was 984.1 deaths per 100,000 population. The age-adjusted death rate, which accounts for the aging of the population, was 798.8 deaths per 100,000 U.S. standard population.
- The age-adjusted death rate for the American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) population (947.9) was 1.2 times greater than for the White non-Hispanic (subsequently, White) population (822.2).
- The age-adjusted death rate for the Black non-Hispanic (subsequently, Black) population (1,002.8) was 1.2 times greater than for the White population (822.2).
- The age-adjusted death rate for the White population (822.2) was 2.0 times greater than for the Asian non-Hispanic (subsequently, Asian) population (417.5) and 1.3 times greater than for the Hispanic population (614.7).
- The ratio of the age-adjusted rate for the White population (822.2) to that of the Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) population (782.0) was 1.1.
- Life expectancy at birth was 77.5 years for the total population, 74.8 for males, and 80.2 for females.
- The 15 leading causes of death in 2022 were:

  1. Diseases of heart (heart disease)
  2. Malignant neoplasms (cancer)
  3. Accidents (unintentional injuries)
  4. COVID-19
  5. Cerebrovascular diseases (stroke)
  6. Chronic lower respiratory diseases

7.   Alzheimer disease
8.   Diabetes mellitus (diabetes)
9.   Nephritis, nephrotic syndrome and nephrosis (kidney disease)
10. Chronic liver disease and cirrhosis
11. Intentional self-harm (suicide)
12. Influenza and pneumonia
13. Essential hypertension and hypertensive renal disease (hypertension)
14. Septicemia
15. Parkinson disease

- In 2022, the infant mortality rate (IMR) was 5.60 infant deaths per 1,000 live births.
- The 10 leading causes of infant death 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.   Accidents (unintentional injuries)
5.   Newborn affected by maternal complications of pregnancy (maternal complications)
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.   Intrauterine hypoxia and birth asphyxia
10. Diseases of the circulatory system

Comparison with previous year

- The age-adjusted death rate decreased 9.2% from 879.7 per 100,000 standard population in 2021 to 798.8 in 2022.
- Life expectancy for the total population increased 1.1 years from 76.4 in 2021 to 77.5 in 2022.
- From 2021 to 2022, life expectancy at birth increased by 1.3 years for males (from 73.5 to 74.8) and by 0.9 year for females (79.3 to 80.2).
- Life expectancy for females (80.2) was 5.4 years higher than for males (74.8), a decrease of 0.4 year from 2021.
- The difference in life expectancy between the Black and White populations decreased 0.8 year from 5.5 years in 2021 to 4.7 years in 2022.
- From 2021 to 2022, life expectancy increased for Hispanic males (2.4 years), American Indian and Alaska Native males (2.3 years), American Indian and Alaska Native females (2.1 years), Hispanic females (1.7 years), Black males and females (1.5 years each), Asian males and White males (1.1 years each), Asian females (0.7 year), and White females (0.6 year).
- The 15 leading causes of death remained the same in 2022 as in 2021, although some causes changed ranks.
- Age-adjusted death rates decreased significantly in 2022 from 2021 for 11 of the 15 leading causes of death: heart

disease, cancer, unintentional injuries, COVID-19, stroke, Chronic lower respiratory diseases, Alzheimer disease, diabetes, Chronic liver disease and cirrhosis, hypertension, and Parkinson disease. Significant increases occurred in 2022 from 2021 for 2 of the 15 leading causes of death: kidney disease and Influenza and pneumonia.
- The age-adjusted death rate decreased in 2022 from 2021 for alcohol-induced causes (6.3%).
- The age-adjusted rate for drug-induced causes did not change significantly in 2022 from 2021.
- The increase in life expectancy at birth for the total population in 2022 was mainly due to decreases in mortality from COVID-19, heart disease, cancer, unintentional injuries, and homicide.
- Among external causes of injury death, unintentional poisoning has been the leading mechanism of injury mortality since 2011.
- IMR increased 2.9% from 5.44 infant deaths per 1,000 live births in 2021 to 5.60 in 2022.
- The 10 leading causes of infant death remained the same in 2022 as in 2021, although two causes, Intrauterine hypoxia and birth asphyxia and Diseases of the circulatory system, changed ranks.

Introduction

This report presents detailed 2022 data on deaths and death rates according to 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).

Cause-of-death statistics presented in this report are classified according to the *International Classification of Diseases, 10th Revision* (ICD–10) (4–6). Detail on cause-of-death classification is provided in Technical Notes of this report. The COVID-19 pandemic that began in 2020 continued to have a substantial impact on the mortality profile of the U.S. population for 2022.

Mortality data 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, and 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 racial and ethnic 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.

The 2003 revision of the U.S. Standard Certificate of Death uses the revised 1997 Office of Management and Budget (OMB) standards for the collection of race and Hispanic ethnicity (7,8). The 1997 standards allow individuals to report more than one race and increase the race categories from four to five by separating the Asian and Pacific Islander groups. Beginning with the 2018

data year, all 50 states and the District of Columbia reported deaths based on the 2003 revision for the entire year, so the revised standards became the official standards for presenting mortality data by race and ethnicity (9). The Hispanic category did not change, remaining consistent with reports before 2018.

The race and ethnicity categories in this report follow the 1997 OMB revised race and Hispanic-origin standards. These categories differ from the bridged-race categories used before 2018 (10). The new categories include Hispanic, single-race American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native), single-race Asian non-Hispanic (subsequently, Asian), single-race Black or African American non-Hispanic (subsequently, Black), single-race Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander), and single-race White non-Hispanic (subsequently, White). Because single-race data are not available for the entire United States before 2018, data by race for 2018 through 2022 are not completely comparable with bridged-race data used in earlier years, so comparisons should be made with this consideration (11).

In addition to the tabulations included in this report, more detailed analysis is possible by using the annual mortality public-use file. The data file may be downloaded from: https://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm (12). Data file documentation is available from: https://www.cdc.gov/nchs/data/dvs/2022-Mortality-Public-Use-File-Documentation.pdf. The public-use file does not include geographic detail, but a file with this information may be available upon request (13). Death data also may be accessed from the Centers for Disease Control and Prevention's (CDC) WONDER, a web-based system that makes the agency's information resources available to public health professionals and the general public (14).

Methods

Data in this report are based on information from all resident death certificates filed in the 50 states and the District of Columbia.

This report provides detailed death data in Tables 1–25. Tables showing data by state also provide information for the Commonwealth of the Northern Mariana Islands (Northern Marianas), Guam, Puerto Rico, and U.S. Virgin Islands.

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, postneonatal, and maternal mortality rates; life expectancy; and rate ratios. Changes in death rates in 2022 compared with 2021 and differences in death rates across demographic groups in 2022 were 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 are presented in Technical Notes.

In accordance with the revised standards issued by OMB in 1997, the 2003 revision of the U.S. Standard Certificate of Death

provided for the reporting of more than one race (multiple races) and increased the race categories from four to five by separating the Asian and Pacific Islander groups (7,8). Starting in 2018, all 50 states and the District of Columbia reported deaths using the 2003 revision for the entire year.

The race and Hispanic-origin groups in this report follow the 1997 standards and differ from the race categories used in reports for data years before 2018 (8,10,15). The categories include Hispanic, single-race American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native), single-race Asian non-Hispanic (subsequently, Asian), single-race Black or African American non-Hispanic (subsequently, Black), single-race Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander), and single-race White non-Hispanic (subsequently, White). For brevity, text references to race refer to single race in this report. Because the number of deaths reported with more than one race in 2022 is relatively small (0.6%), these deaths are included in totals but are shown separately in only one report table (Table 2). Some comparisons between race and ethnicity groups in this report are limited to the following groups based on population size: American Indian and Alaska Native, Asian, Black, Hispanic, and White.

Data presented in this report by the revised Hispanic-origin and race categories for 2018–2022 are not completely comparable with data by bridged-race shown in earlier reports, and comparisons should be made with this consideration. The Hispanic-origin category is a separate item on the death certificate and was not affected by the revised standards; as a result, data by Hispanic origin for 2022 and earlier years are comparable.

Death rates by race and ethnicity for the American Indian and Alaska Native, Asian, Hispanic, and Native Hawaiian or Other Pacific Islander populations are affected by inconsistencies in reporting Hispanic origin and race on death certificates as compared with censuses and surveys (16). Death rates for the American Indian and Alaska Native population are underestimated by about 33% due to misclassification (16). Death rates for the Asian and Hispanic populations are underestimated by about 3.0% (16). This should be considered when making rate comparisons across racial and ethnic groups. At this time, information about the prevalence of misclassification for the Native Hawaiian or Other Pacific Islander population is not available.

To maintain consistency with data reported by the jurisdictions and data in the mortality data file, numbers of deaths and death rates in this report are not adjusted for misclassification of race and ethnicity unless otherwise indicated. Specifically, Tables 4 and 5 present life expectancies by Hispanic origin and race that are produced using methods based on death rates adjusted for Hispanic origin and race misclassification on death certificates. For additional detail, see *Quality of race and Hispanic-origin data* in Technical Notes.

The population data used to calculate death rates for 2022 shown in this report are estimated as of July 1, 2022, based on the Blended Base produced by the U.S. Census Bureau (Technical Notes), and are available from the CDC WONDER website: https://wonder.cdc.gov/single-race-population.html (17).

Data presented in this report and other mortality tabulations are available from the National Vital Statistics System website: https://www.cdc.gov/nchs/deaths.htm. The availability of mortality microdata is described in Technical Notes.

Results and Discussion

Deaths and death rates

In 2022, a total of 3,279,857 resident deaths were registered in the United States—184,374 fewer deaths than in 2021. The crude death rate for 2022 (984.1 deaths per 100,000 population) was 5.7% lower than the 2021 rate (1,043.8) (Tables A, 1, 2, 6, 8, and 10).

The age-adjusted death rate in 2022 was 798.8 deaths per 100,000 U.S. standard population—9.2% lower than the rate of 879.7 in 2021 (Tables A and 1). The age-adjusted death rates decreased for males (8.9%) and females (9.2%). 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 are also better indicators of relative risk when comparing mortality across geographic areas or between sex or race and ethnicity 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, 2010, 2013, 2015, 2017, 2020, and 2021 (Figure 1) (14).

Death rates by Hispanic origin and race

In 2022, age-adjusted death rates by ethnicity and race groups (Table 1) were:

- Hispanic population: 614.7 deaths per 100,000 U.S. standard population
- American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) population: 947.9
- Asian non-Hispanic (subsequently, Asian) population: 417.5
- Black non-Hispanic (subsequently, Black) population: 1,002.8
- Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) population: 782.0
- White non-Hispanic (subsequently, White) population: 822.2

In 2022, the age-adjusted death rate for the American Indian and Alaska Native population was 1.2 times that for the White population. The rate for the Black population was 1.2 times that for the White population. The rate for the White population was 2.0 times the rate for the Asian population, 1.1 times the rate for Native Hawaiian or Other Pacific Islander population, and 1.3 times the rate for the Hispanic population (Table B).

From 2021 to 2022, the age-adjusted rate decreased 15.4% (from 924.3 to 782.0) for the Native Hawaiian or Other Pacific Islander population, 15.2% (from 724.7 to 614.7) for the Hispanic population, 14.5% (from 1,109.2 to 947.9) for the American Indian and Alaska Native population, 10.3% (from 1,118.0 to 1,002.8) for the Black population, 9.6% (461.7 to 417.5) for the Asian population, and 8.0% (893.9 to 822.2) for the White population (Tables A and 1).

From 2021 to 2022, the age-adjusted death rate decreased 17.6% for Native Hawaiian or Other Pacific Islander males, 15.5% for American Indian and Alaska Native males, 15.4% for Hispanic males, 14.5% for Hispanic females, 13.8% for American Indian and Alaska Native females, 12.5% for Native Hawaiian or Other Pacific Islander females, 11.8% for Black females, 9.6% for Asian males, 9.2% for Asian females, 8.5% for Black males, 7.9% for White males, and 7.8% for White females (Tables A and 1).

Hispanic subgroups—Mortality data for 2022 by specified Hispanic subgroup for the United States are presented in Table 3. Hispanic subgroups shown in the table include Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and Other Hispanic populations.

In 2022, age-adjusted rates among the Hispanic subgroups ranged from a low of 344.9 for the South American population to a high of 688.1 for the Puerto Rican population. Differences between subgroups are likely a function of large variation in age-specific death rates for some of the Hispanic subgroups, reflecting their relatively small population sizes. Data aggregated over several years confirm differences among the Hispanic subgroups (16).

Death rates by age and sex

For the total population, age-specific death rates increased significantly from 2021 to 2022 for age groups 1–4 and 5–14 and decreased for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older (Tables 6 and 8; Figure 2). The rate for younger than 1 year did not change significantly.

The age-adjusted death rate for males was 1.4 times the rate for females in 2022 (Table B). The male-to-female death rate ratio was unchanged from the ratio in 2021.

Death rates for males increased significantly for age group 1–4 and decreased for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. Changes in rates for males younger than 1 and ages 5–14 were not statistically significant. Death rates for females increased significantly for age groups 1–4 and 5–14 and decreased for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. The rate for females younger than 1 did not change significantly.

Race and ethnicity by sex—For the total Hispanic population, Hispanic males, and Hispanic females, age-specific death rates decreased from 2021 to 2022 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older.

For the total, male, and female American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska

Table A. Percent change in death rates and age-adjusted death rates in 2022 from 2021, by age, Hispanic origin and race, 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 in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards; see Technical Notes. Data for some Hispanic-origin or race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Age group	Both sexes	Male	Female	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 ages																					
Crude rate	-5.7	-7.0	-4.3	-14.1	-15.8	-11.7	-11.3	-12.7	-9.7	-5.9	-7.7	-3.9	-8.9	-8.5	-9.3	-13.4	-16.6	-9.4	-3.7	-5.0	-2.1
Age-adjusted rate.	-9.2	-8.9	-9.2	-15.2	-15.4	-14.5	-14.5	-15.5	-13.8	-9.6	-9.6	-9.2	-10.3	-8.5	-11.8	-15.4	-17.6	-12.5	-8.0	-7.9	-7.8
Younger than 1[4]	-0.1	0.8	-1.4	1.1	2.2	-0.3	15.3	22.6	6.9	-6.7	-5.3	-8.6	-5.5	-5.0	-6.2	30.0	6.4	76.9	1.6	2.8	0.1
1–4.	12.0	14.8	8.3	9.4	13.6	5.0	26.3	2.1	65.1	1.4	10.3	-6.9	5.6	11.7	-1.7	*	*	*	16.0	17.6	14.1
5–14.	7.0	4.3	9.0	4.8	6.6	2.7	39.3	56.4	22.9	-1.2	-3.1	0.0	0.8	-3.5	8.1	*	*	*	9.4	6.8	13.0
15–24.	-10.6	-11.0	-10.1	-8.9	-8.4	-11.3	-5.7	-4.6	-7.9	-13.0	-13.3	-13.3	-10.4	-9.5	-13.2	-27.9	-24.6	-36.9	-11.2	-12.8	-7.7
25–34.	-9.6	-9.9	-9.8	-8.7	-7.7	-12.5	-6.3	-7.8	-3.9	-7.3	-7.6	-7.2	-10.7	-10.2	-12.6	-21.1	-24.7	-12.2	-9.7	-10.8	-8.1
35–44.	-11.3	-11.0	-12.2	-16.9	-16.4	-18.8	-10.3	-7.2	-15.6	-9.7	-12.4	-5.1	-11.3	-10.5	-13.2	-28.4	-27.0	-30.9	-9.5	-9.3	-10.3
45–54.	-14.6	-15.3	-13.8	-24.3	-25.4	-22.4	-15.8	-17.0	-14.4	-12.5	-14.1	-10.1	-15.2	-14.4	-16.6	-27.8	-32.8	-20.2	-11.7	-12.5	-10.6
55–64.	-11.2	-12.0	-10.1	-24.7	-25.3	-23.7	-17.2	-20.2	-12.9	-14.9	-16.0	-13.5	-12.7	-11.9	-13.8	-15.3	-15.0	-15.8	-8.2	-9.4	-6.6
65–74.	-8.0	-8.3	-7.5	-19.6	-20.0	-19.1	-15.9	-15.1	-16.7	-11.0	-10.8	-11.4	-10.0	-8.5	-11.6	-12.9	-18.9	-5.4	-6.1	-6.9	-5.1
75–84.	-8.0	-8.4	-7.6	-14.9	-16.1	-13.6	-16.3	-19.9	-12.8	-9.3	-10.5	-7.7	-9.6	-7.3	-11.4	-5.7	-5.7	-5.8	-7.1	-7.7	-6.5
85 and older	-8.6	-6.1	-9.9	-7.1	-4.2	-8.5	-19.2	-21.1	-18.0	-7.4	-4.8	-9.0	-7.8	-3.3	-9.7	-16.9	-14.5	-18.5	-8.7	-6.3	-10.0

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
[1]Includes deaths with origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.
[2]Includes persons of Hispanic origin of any race; see Technical Notes.
[3]Only one race was reported on the death certificate; see Technical Notes.
[4]Death rates for "Younger than 1" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Figure 1. Crude and age-adjusted death rates: United States, 1960–2022

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 in this report.
SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.
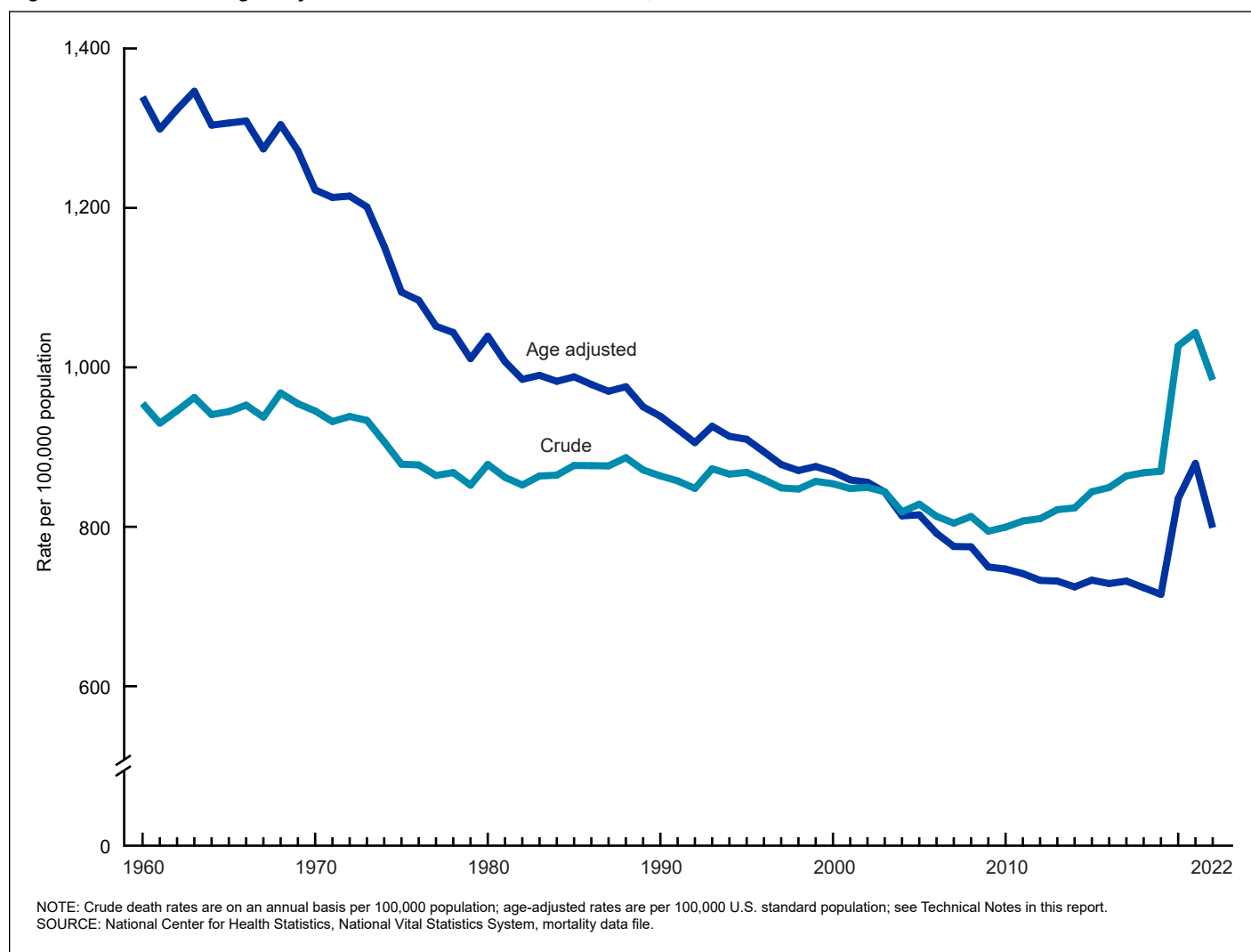
Native) populations, age-specific death rates decreased from 2021 to 2022 for age groups 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. For the total and male American Indian and Alaska Native populations, the rates increased for age group 5–14.

For the total Asian non-Hispanic (subsequently, Asian) population, age-specific rates decreased from 2021 to 2022 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. For Asian males, rates decreased for age groups 15–24, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. For Asian females, rates decreased for age groups 45–54, 55–64, 65–74, 75–84, and 85 and older.

For the total, male, and female Black non-Hispanic (subsequently, Black) populations, age-specific death rates decreased from 2021 to 2022 for age groups younger than 1, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older.

For the total Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) population, age-specific death rates decreased for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, and 85 and older. For Native Hawaiian or Other Pacific Islander males, rates

decreased for age groups 25–34, 35–44, 45–54, 55–65, and 65–74. For Native Hawaiian or Other Pacific Islander females, rates increased for younger than 1 year and decreased for age groups 35–44, 45–54, 55–64, and 85 and older.

For the total, male, and female White non-Hispanic (subsequently, White) populations, age-specific death rates decreased from 2021 to 2022 for age groups 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and older. For the total and female White populations, the rates increased for age groups 1–4 and 5–14 and for White males, the rate increased for age group 1–4 (Tables A and 2).

Other observed changes from 2021 to 2022 in age-specific rates by race and ethnicity and sex were not statistically significant.

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.

Table B. Number of deaths, percentage of total deaths, death rate, and age-adjusted death rate for 2022, percent change in age-adjusted death rates in 2022 from 2021, and ratio of age-adjusted death rates, by sex and by Hispanic origin and race for the 15 leading causes of death for the total population in 2022: 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards]

					Age-adjusted death rate							
								Ratio				
									Non-Hispanic, single race[3]			
Rank[1]	Cause of death (based on ICD–10)	Number	Percent of total deaths, 2022[2]	Crude death rate, 2022	2022	Percent change from 2021 to 2022	Male to female	American Indian and Alaska Native to White	Black to White	White to Asian	White to Native Hawaiian or Other Pacific Islander	White, non-Hispanic[3] to Hispanic[4]
...	All causes.	3,279,857	100.0	984.1	798.8	-9.2	1.4	1.2	1.2	2.0	1.1	1.3
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	702,880	21.4	210.9	167.2	-3.8	1.6	0.9	1.3	2.1	1.0	1.5
2	Malignant neoplasms (C00–C97)	608,371	18.5	182.5	142.3	-2.9	1.3	0.8	1.1	1.7	1.1	1.4
3	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	227,039	6.9	68.1	64.0	-1.1	2.3	1.9	1.2	3.6	1.4	1.4
4	COVID-19 (U07.1)	186,552	5.7	56.0	44.5	-57.3	1.6	1.5	1.2	1.7	0.9	0.9
5	Cerebrovascular diseases (I60–I69)	165,393	5.0	49.6	39.5	-3.9	1.1	0.8	1.5	1.3	0.7	1.1
6	Chronic lower respiratory diseases (J40–J47)	147,382	4.5	44.2	34.3	-1.2	1.1	0.7	0.7	4.7	2.0	2.8
7	Alzheimer disease (G30)	120,122	3.7	36.0	28.9	-6.8	0.7	0.5	0.9	1.9	1.5	1.1
8	Diabetes mellitus (E10–E14)	101,209	3.1	30.4	24.1	-5.1	1.6	2.2	2.0	1.2	0.4	0.8
9	Nephritis, nephrotic syndrome and nephrosis (N00–N07,N17–N19,N25–N27)	57,937	1.8	17.4	13.8	1.5	1.4	1.4	2.2	1.3	0.6	1.0
10	Chronic liver disease and cirrhosis (K70,K73–K74)	54,803	1.7	16.4	13.8	-4.8	1.8	4.4	0.6	3.6	2.0	0.9
11	Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)	49,476	1.5	14.8	14.2	0.7	3.9	1.5	0.5	2.6	1.2	2.2
12	Influenza and pneumonia (J09–J18)	47,052	1.4	14.1	11.3	7.6	1.4	1.4	1.1	1.4	1.1	1.2
13	Essential hypertension and hypertensive renal disease (I10,I12,I15)	43,293	1.3	13.0	10.3	-3.7	1.2	1.0	2.0	1.1	0.8	1.0
14	Septicemia (A40–A41)	42,261	1.3	12.7	10.1	-1.0	1.3	1.3	1.7	2.2	0.9	1.3
15	Parkinson disease (G20–G21)	39,915	1.2	12.0	9.5	-3.1	2.3	0.4	0.5	1.8	*	1.6
...	All other causes (residual)	686,172	20.9	205.9	...	...	...	...	...	...	...	...

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

... Category not applicable.

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

[2]Percentages may not add to 100 due to rounding.

[3]Includes only one race reported on the death certificate; see Technical Notes.

[4]Includes people of Hispanic origin of any race; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Figure 2. Death rate, by age and sex: United States, 1955–2022

¹Rates are based on population estimates, which differ from infant mortality rates (based on live births); see Figure 5 in this report for infant mortality rates and Technical Notes in this report for further discussion of the difference.
SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.
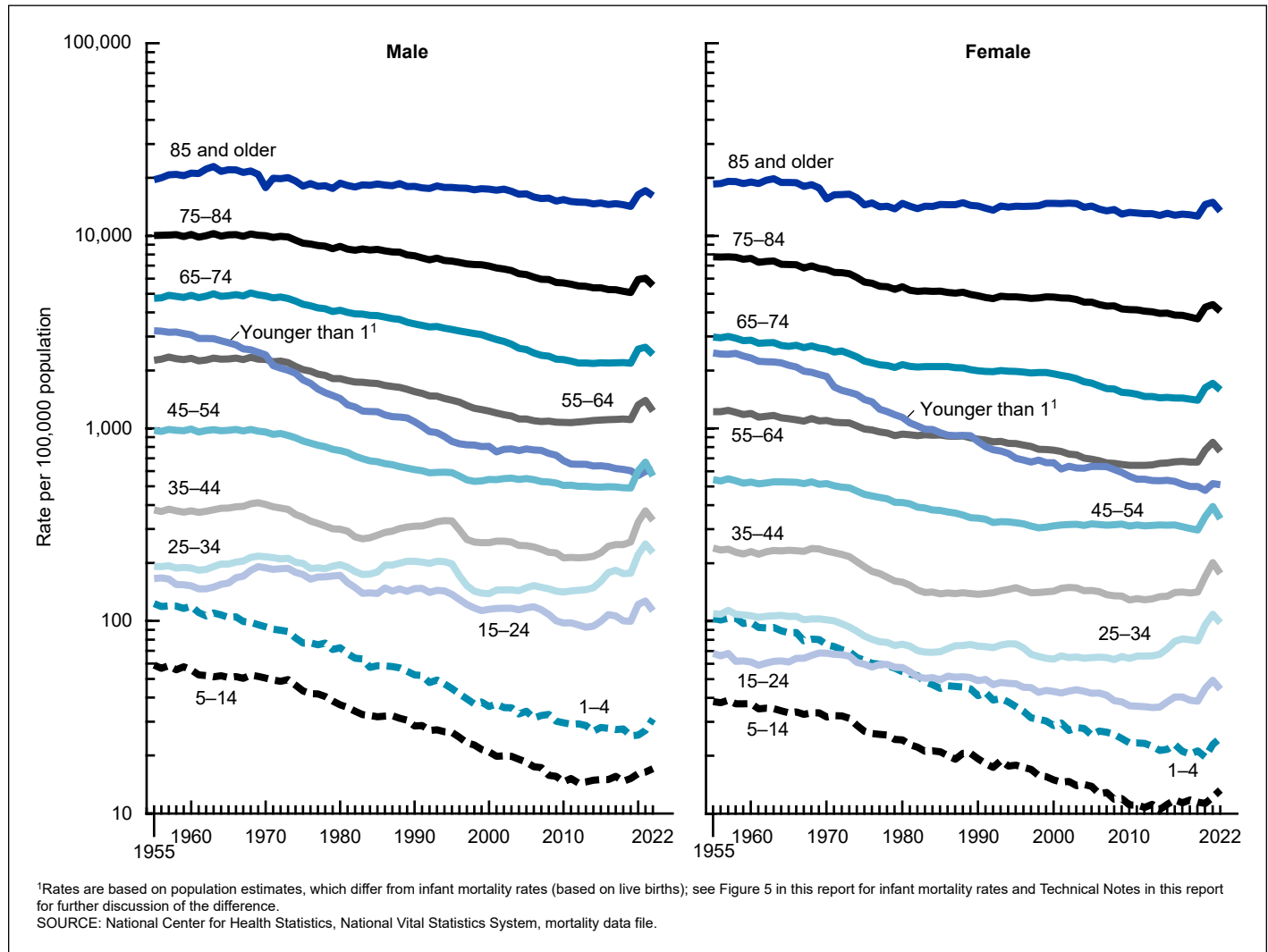
Life table data shown in this report for 2010–2022 are based on a revised methodology first presented with final data reported for 2008. The life table methodology was revised by changing the smoothing technique used to estimate the life table functions at the oldest ages. This revision improves on the methodologies used previously; see Technical Notes.

The methods used to produce life expectancies by Hispanic origin and race are based on death rates adjusted for Hispanic-origin and race misclassification on death certificates (Technical Notes). As noted in the Methods section, the age-specific and age-adjusted death rates shown in this report (with the exception of Table IV) are not adjusted for misclassification of Hispanic origin and race on death certificates. For further information on the effects of Hispanic origin and race misclassification on death rates, see Technical Notes.

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

- Total United States
- Hispanic
- American Indian and Alaska Native non-Hispanic
- Asian non-Hispanic

- Black non-Hispanic
- White non-Hispanic

In 2022, life expectancy for the total population (77.5 years) was 1.1 years higher than in 2021. This increase followed the two largest single-year decreases in life expectancy (1.8 years in 2020 and 0.6 year in 2021) since 1943 (Tables 4 and 5). The increase in life expectancy was mostly due to the decrease in deaths from COVID-19. Before the COVID-19 pandemic, the general trend in U.S. life expectancy had been one of improvement since 1900. In 2022, life expectancy for males (74.8 years) was 1.3 years higher than in 2021. Life expectancy for females (80.2 years) was 0.9 year higher than in 2021. From 1900 through the late 1970s, the gap in life expectancy between the sexes widened from 2.0 to 7.8 years (3). The gap between sexes has narrowed since its peak in the 1970s (Figure 3 and Table 5). In 2022, the difference in life expectancy between males and females was 5.4 years, a decrease of 0.4 year from 2021.

Life expectancy figures for the Hispanic, Black non-Hispanic (subsequently, Black), and White non-Hispanic (subsequently, White) populations have been available starting with data for 2006. Before 2006, life tables were produced for the Black

Figure 3. Life expectancy at birth, by sex: United States, 1970–2022

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.
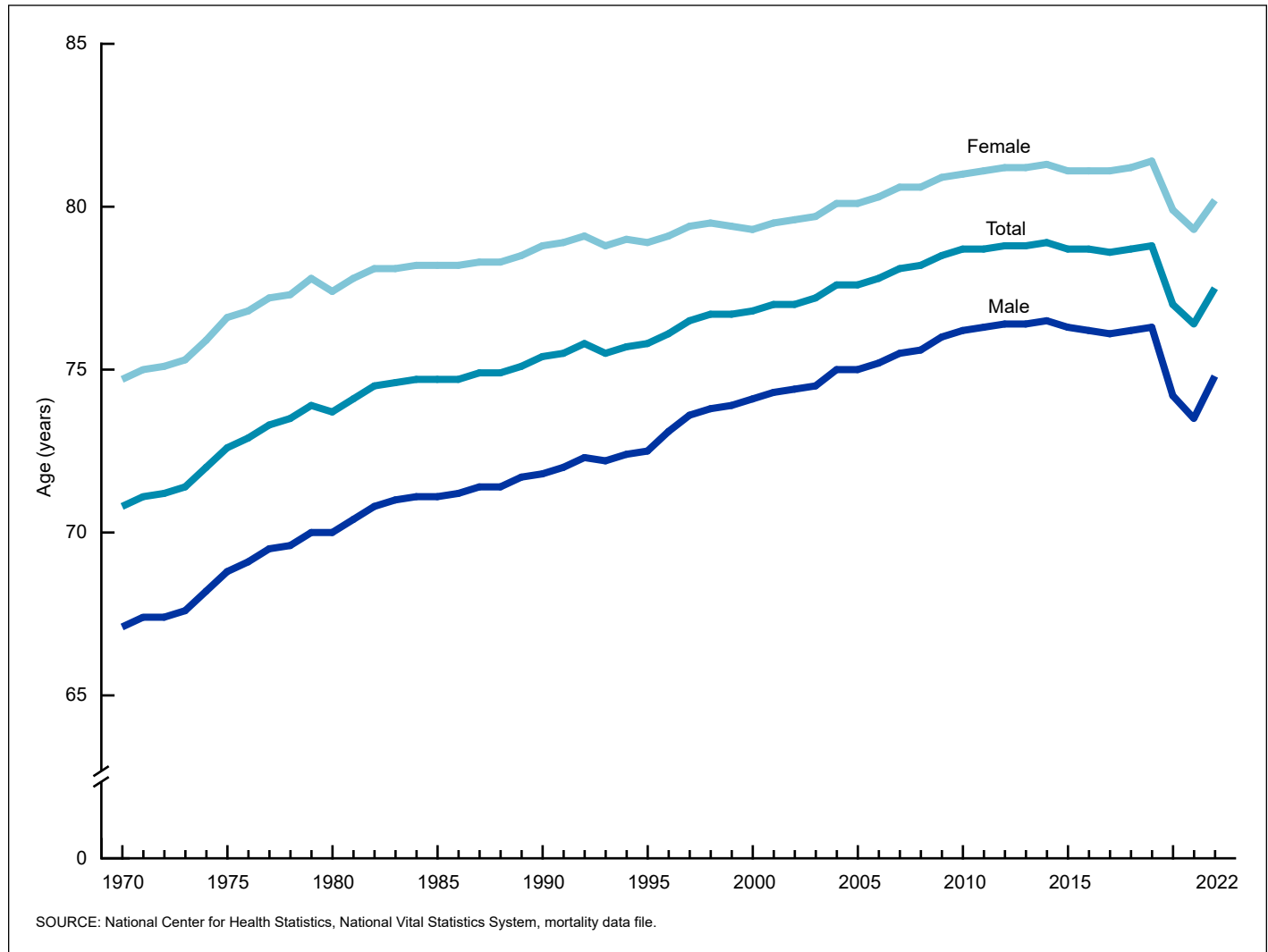
and White populations, regardless of Hispanic origin (18). Life tables for the American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) and Asian non-Hispanic (subsequently, Asian) populations were added to the Life Table Program beginning with data for 2019 (19).

Life expectancy for the American Indian and Alaska Native population increased 2.2 years (from 65.6 years in 2021 to 67.8 in 2022).

Life expectancy for the Hispanic population increased by 2.2 years (from 77.8 years in 2021 to 80.0 in 2022) (Table 5). The difference in life expectancy between the Hispanic and White populations increased 1.4 years from 1.1 years in 2021 to 2.5 years in 2022.

Life expectancy increased by 1.6 years for the Black population (from 71.2 years in 2021 to 72.8 in 2022). The difference in life expectancy between the White and Black populations decreased 0.8 year from 5.5 years in 2021 to 4.7 years in 2022 (Table 5).

Life expectancy increased by 0.9 year for the Asian population (from 83.5 years in 2021 to 84.4 in 2022) (Table 5).

Life expectancy increased by 0.8 year for the White population (from 76.7 years in 2021 to 77.5 in 2022) (Table 5).

Among the 10 major race–ethnicity–sex groups in 2022, Asian females had the highest life expectancy at birth (86.3 years), followed by Hispanic females (82.8), Asian males (82.3), White females (80.1), Hispanic males (77.0), Black females (76.5), White males (75.1), American Indian and Alaska Native females (71.3), Black males (69.1), and American Indian and Alaska Native males (64.5) (Tables 4 and 5).

Life tables shown in this report may be used to compare life expectancies at selected ages from birth to 100 years. For example, based on mortality experienced in 2022 for the total population, a person age 50 could expect to live an average of 30.9 more years, for a total of 80.9 years. A person age 65 could expect to live an average of 18.9 more years, for a total of 83.9 years, and a person age 85 could expect to live an average of 6.4 more years, for a total of 91.4 years (Table 4). Life expectancy increased at ages from birth through age 85 and was either unchanged or decreased for age 90 and older from 2021 to 2022 (3).

Leading causes of death

The 15 leading causes of death in 2022 accounted for 79.1% of all deaths in the United States (Tables B and 6). In 2022, the 15 leading causes of death remained the same as in 2021, although some changed ranks. Heart disease and cancer remained the top two leading causes in 2022. Of the remaining leading causes in 2022, six causes changed rank. Unintentional injuries, the 4th leading cause in 2021, became the 3rd leading cause in 2022. COVID-19, the 3rd leading cause in 2021, became the 4th. Kidney disease, the 10th leading cause in 2021, became the 9th. Chronic liver disease and cirrhosis, the 9th leading cause in 2021, became the 10th. Influenza and pneumonia, the 13th leading cause in 2021, became the 12th. Hypertension, the 12th leading cause in 2021, became the 13th. 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 2022 were:

1. Diseases of heart (heart disease)
2. Malignant neoplasms (cancer)
3. Accidents (unintentional injuries)
4. COVID-19
5. Cerebrovascular diseases (stroke)
6. Chronic lower respiratory diseases
7. Alzheimer disease
8. Diabetes mellitus (diabetes)
9. Nephritis, nephrotic syndrome and nephrosis (kidney disease)
10. Chronic liver disease and cirrhosis
11. Intentional self-harm (suicide)
12. Influenza and pneumonia
13. Essential hypertension and hypertensive renal disease (hypertension)
14. Septicemia
15. Parkinson disease

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. Consequently, while 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

Figure 4. Age-adjusted death rate for selected leading causes of death: United States, 1958–2022

NOTES: ICD is the *International Classification of Diseases*. Circled numbers indicate ranking of conditions as leading causes of death in 2022.
SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.
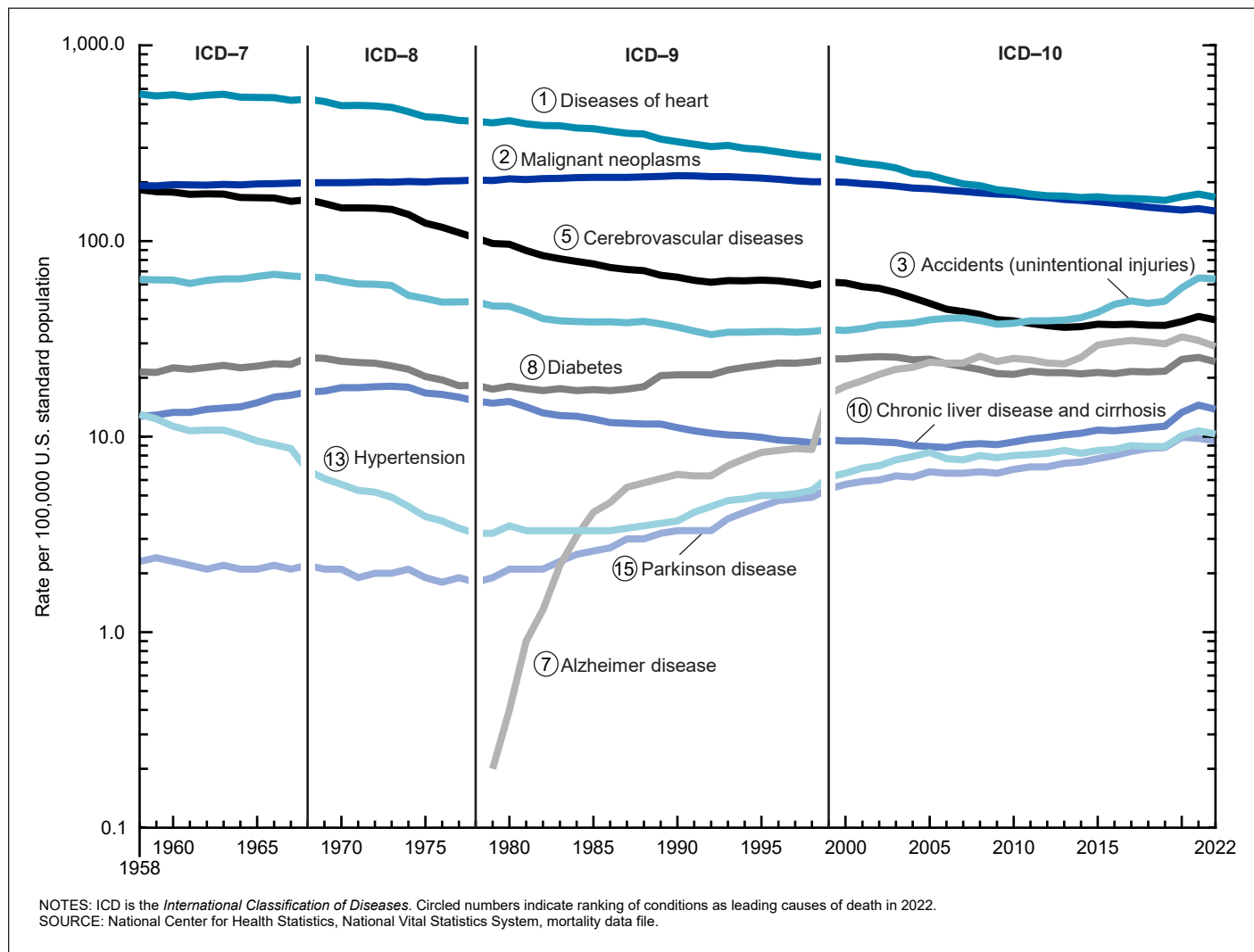
because they are better than crude rates for showing changes in mortality over time and among causes of death (Figure 4; Tables B and 6).

From 2021 through 2022, age-adjusted death rates decreased significantly for 11 of the 15 leading causes of death and increased for 2 of the 15 leading causes (Tables B and 6). The rate for the top leading cause of death, heart disease, decreased 3.8% in 2022 from 2021 (Figure 4; Tables B and 6) (14). The rate for the second leading cause of death, cancer, decreased 2.9% from 2021 to 2022. Deaths from these two diseases combined accounted for 40.0% of deaths in the United States in 2022.

Unintentional injuries, the third leading cause of death in 2022, accounted for 6.9% of deaths in the United States. The age-adjusted death rate for unintentional injuries decreased 1.1% from 2021 (64.7) to 2022 (64.0).

COVID-19, the fourth leading cause of death in 2022, accounted for 5.7% of deaths in the United States. The number of deaths from COVID-19 decreased 55.3% from 416,893 in 2021 to 186,552 in 2022.

In 2022, the age-adjusted death rate for COVID-19 decreased 57.3%, from 104.1 per 100,000 standard population in 2021 to 44.5 in 2022. The rate for males (56.7) was 1.6 times higher than the rate for females (35.4) (Tables B and 11). Among race and ethnicity groups, the rate was highest for the American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) population (65.9), followed by Black non-Hispanic (subsequently, Black) (53.9), Native Hawaiian or Other Pacific Islander non-Hispanic (subsequently, Native Hawaiian or Other Pacific Islander) (48.9), Hispanic (47.2), White non-Hispanic (subsequently, White) (43.9), and Asian non-Hispanic (subsequently, Asian) (25.3) populations (Tables 1 and 11).

Other leading causes of death that showed significant decreases in 2022 from 2021 were stroke (3.9%), Chronic lower respiratory diseases (1.2%), Alzheimer disease (6.8%), diabetes (5.1%), Chronic liver disease and cirrhosis (4.8%), hypertension (3.7%), and Parkinson disease (3.1%).

The age-adjusted rate increased significantly in 2022 from 2021 for kidney disease (1.5%) and Influenza and pneumonia (7.6%).

The age-adjusted death rates for suicide and Septicemia in 2022 were not significantly different from the rates in 2021.

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 14 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 (3.9). Other high ratios were observed for unintentional injuries and Parkinson disease (2.3 each); Chronic liver disease and cirrhosis (1.8); heart disease, COVID-19, and diabetes (1.6 each); kidney disease and Influenza and pneumonia (1.4 each); cancer and Septicemia (1.3 each); hypertension (1.2); and stroke and Chronic lower respiratory diseases (1.1 each). Age-adjusted rates were lower for males than for females for one leading cause, Alzheimer disease (0.7).

Age-adjusted death rates for the American Indian and Alaska Native population were higher than for the White population for 8 of the 15 leading causes of death (Tables B and 6). The largest ratio was for Chronic liver disease and cirrhosis (4.4). Other causes for which the ratio was high include diabetes (2.2); unintentional injuries (1.9); COVID-19 and suicide (1.5 each); kidney disease and Influenza and pneumonia (1.4 each); and Septicemia (1.3). Age-adjusted rates for the American Indian and Alaska Native population were lower than for the White population for 6 of the 15 leading causes of death. The smallest American Indian and Alaska Native-to-White ratio was for Parkinson disease (0.4); that is, the risk of dying from Parkinson disease was more than two times greater for the White population than for the American Indian and Alaska Native population. Other causes with a low American Indian and Alaska Native-to-White ratio were Alzheimer disease (0.5); Chronic lower respiratory diseases (0.7); cancer and stroke (0.8 each); and heart disease (0.9).

Age-adjusted death rates for the Black population were higher than for the White population for 10 of the 15 leading causes of death (Tables B and 6). The largest ratio was for kidney disease (2.2). Other causes for which the ratio was high include diabetes and hypertension (2.0 each); Septicemia (1.7); stroke (1.5); heart disease (1.3); unintentional injuries and COVID-19 (1.2 each); and cancer and Influenza and pneumonia (1.1 each). For five of the leading causes, age-adjusted rates were lower for the Black population than for the White population. The smallest Black-to-White ratios were for suicide and Parkinson disease (0.5 each). Other causes with low Black-to-White ratios were Chronic liver disease and cirrhosis (0.6); Chronic lower respiratory diseases (0.7); and Alzheimer disease (0.9).

Age-adjusted death rates for the White population were higher than for the Asian population for each of the 15 leading causes of death (Tables B and 6). The highest ratios were for Chronic lower respiratory diseases (4.7); followed by unintentional injuries and Chronic liver disease and cirrhosis (3.6 each); suicide (2.6); Septicemia (2.2); heart disease (2.1); Alzheimer disease (1.9); Parkinson disease (1.8); cancer and COVID-19 (1.7 each); Influenza and pneumonia (1.4); stroke and kidney disease (1.3 each); diabetes (1.2); and hypertension (1.1)

Age-adjusted death rates for the White population were higher than Native Hawaiian or Other Pacific Islander population for 7 of the 15 leading causes of death (Tables B and 6). The highest ratios were for Chronic lower respiratory disease and chronic liver disease and cirrhosis (2.0 each); followed by Alzheimer disease (1.5); unintentional injuries (1.4); suicide (1.2); and cancer and Influenza and pneumonia (1.1 each). Age-adjusted death rates for the White population were lower than for the Native Hawaiian or Other Pacific Islander population for 6 of the 15 leading causes of death. The smallest ratio was for diabetes (0.4); followed by kidney disease (0.6); stroke (0.7); hypertension (0.8); and COVID-19 and Septicemia (0.9 each).

Age-adjusted death rates for the White population were higher than for the Hispanic population for 10 of the 15 leading causes of death (Tables B and 6). The largest ratio was for Chronic lower respiratory diseases (2.8). Other causes with high ratios include suicide (2.2); Parkinson disease (1.6); heart disease (1.5); cancer and unintentional injuries (1.4 each);

Septicemia (1.3); Influenza and pneumonia (1.2); and stroke and Alzheimer disease (1.1 each). Age-adjusted rates were lower for the White population than for the Hispanic population for 3 of the 15 leading causes. The smallest White-to-Hispanic ratio was for diabetes (0.8), followed by COVID-19 and Chronic liver disease and cirrhosis (0.9 each).

Assault (homicide), the 16th leading cause of death in 2022, dropped from among the 15 leading causes of death in 2010. In 2022, the age-adjusted rate for homicide decreased 6.1%, from 8.2 in 2021 to 7.7 per 100,000 standard population in 2022 (Table 11). Homicide remains a major issue for some age groups. Homicide was among the 15 leading causes of death in 2022 for age groups 1–4 (3rd), 5–14 (3rd), 15–24 (2nd), 25–34 (3rd), 35–44 (6th), 45–54 (10th), and 55–64 (14th) (14) (For leading causes of infant death, see "Infant mortality").

Although Human immunodeficiency virus (HIV) disease has not been among the 15 leading causes of death since 1997 (20), it is still considered a major public health problem for some age groups. The age-adjusted death rate (1.3 deaths per 100,000 U.S. standard population) for HIV disease remained unchanged statistically in 2022 from 2021 (Table 11). 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 6.1% per year from 1999 through 2021 (9,13). In 2022, HIV disease was among the 15 leading causes of death for age groups 25–34 (13th), 35–44 (13th), and 45–54 (15th). The influence of HIV disease for younger age groups and by race and ethnicity shows among the 25–34 age group, where its rank is 9th for males, 7th for Black males, 11th for Black females, and 10th for Hispanic males.

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 often acquired in hospitals or other health care facilities with long-term patients or residents (21,22). The number of deaths from *C. difficile* climbed from 793 deaths in 1999 to a high of 8,085 deaths in 2011 (14). From 2011 to 2021, the number of deaths from this cause trended downward. In 2022, the number of deaths from *C. difficile* was 4,231 (126 more deaths than in 2021). The age-adjusted death rate in 2022 was unchanged from 2021, 1.0 deaths per 100,000 standard population. About 85.4% of deaths from *C. difficile* occurred among people age 65 and older (Table 7).

Leading causes of death in 2022 for the total population and for specific subpopulations are detailed further in a companion *National Vital Statistics Report* on leading causes by age, Hispanic origin and race, and sex (2).

Other selected causes

Dementia-related mortality

In 2022, 292,881 people died of dementia-related causes in the United States (Tables 7, 9, and 22). Deaths from dementia-related causes were presented for the first time in this report series in 2018 to provide a more comprehensive estimate of the burden of mortality from Alzheimer disease and other dementias in the United States.

Dementia-related causes include conditions with similar physical signs and symptoms that, collectively, are considered to be a good indicator of dementia mortality (23). Dementia is characterized by memory impairment and cognitive decline (24–26). Causes of death attributable to dementia-related mortality include ICD–10 codes F01, Vascular dementia; F03, Unspecified dementia; G30, Alzheimer disease; and G31, Other degenerative diseases of nervous system, not elsewhere classified. Alzheimer disease, the sixth leading cause of death, is the most common cause of dementia, but other dementias, including Lewy body dementia, frontotemporal degeneration, vascular dementia, and mixed dementias, are often indistinguishable from Alzheimer disease in their symptoms and outcomes and may coexist with Alzheimer disease (22–24).

Certification and coding rule changes can impact data analysis of component causes of dementia. In 2022, Alzheimer disease accounted for 41.0% of all dementia deaths; Unspecified dementia for 31.9%; Other degenerative diseases of nervous system, not elsewhere classified for 19.9%; and Vascular dementia for 7.1%. For detailed information, see CDC WONDER (14). Changes in the percentage of deaths assigned to individual causes comprising dementia may be the result of many factors (25). Combining the types of dementia provides a more comprehensive and stable measure of dementia mortality.

The age-adjusted death rate for dementia-related causes decreased 2.8% in 2022 from 2021 for the total population (from 72.4 to 70.4). The rate for females decreased 4.2% (80.2 to 76.8). The rate for males was unchanged (59.7) (Tables 11 and 22).

Among race–ethnicity groups—Age-adjusted rates for American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) females decreased 11.8% (51.6 to 45.5). Rates for the total and female Black non-Hispanic (subsequently, Black) populations decreased 5.6% (71.8 to 67.8) and 7.9% (75.9 to 69.9), respectively. Rates for the total and female White non-Hispanic (subsequently, White) population decreased 2.8% (77.4 to 75.2) and 4.3% (86.3 to 82.6), respectively. Changes in age-adjusted death rates for dementia-related causes were not statistically significant for the other race–ethnicity–sex categories.

Drug-induced mortality

In 2022, a total of 112,109 people died of drug-induced causes in the United States (Tables 7, 9, and 23). The category of drug-induced causes includes deaths from drug overdose as well as from other medical conditions caused by use of legal or illegal drugs. In 2022, drug-overdose deaths accounted for 96.3% of all drug-induced deaths (Tables 7 and 9). The drug-induced category excludes deaths indirectly related to drug use, as well as newborn deaths due to the mother's drug use. (For a list of all drug-induced causes including those specifically classified as drug-overdose causes, see Technical Notes.)

The age-adjusted death rate for drug-induced causes did not change significantly for the total, male, and female populations from 2021 to 2022 (Tables 6, 11, and 23). For males in 2022, the

age-adjusted death rate for drug-induced causes was 2.3 times the rate for females.

Among race–ethnicity groups—Age-adjusted rates increased from 2021 and 2022 by 15.1% for the American Indian and Alaska Native population (20.3% for American Indian and Alaska Native males), 12.2% for the Asian population (14.5% for Asian males), 7.4% for the Black population (8.5% for Black males), and 6.8% for the Hispanic population (8.4% for Hispanic males). Rates for the White population decreased 3.4% (3.9% for White males and 2.8% for White females) (Tables 11 and 23). Changes in age-adjusted rates from 2021 to 2022 were not significant for other race–ethnicity–sex categories.

Alcohol-induced mortality

In 2022, a total of 51,191 people died of alcohol-induced causes in the United States (Tables 7, 9, and 24). This category includes deaths from dependent and nondependent use of alcohol, and deaths from accidental poisoning by alcohol. It excludes unintentional injuries, homicides, and other causes indirectly related to alcohol use, and 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 decreased 6.3% for the total population, from 14.4 in 2021 to 13.5 in 2022 (Tables 6, 11, and 24). For males in 2022, the age-adjusted death rate for alcohol-induced causes was 2.5 times the rate for females. The rate decreased 6.7% for males and 6.0% for females from 2021 to 2022 (Tables 11 and 24).

Among race–ethnicity groups—Age-adjusted rates decreased in 2022 from 2021 by 14.5% for the American Indian and Alaska Native population (15.2% for American Indian and Alaska Native males and 13.5% for American Indian and Alaska Native females), 13.4% for the Black population (12.7% for Black males and 14.9% for Black females), 4.0% for Hispanic males, and 5.1% for the White population (6.0% for White males and 4.2% for White females) (Tables 11 and 24). The age-adjusted rate for alcohol-induced death did not change significantly in 2022 from 2021 for other race–ethnicity–sex categories.

Firearm-related mortality

In 2022, 48,204 people died from firearm-related injuries in the United States (Tables 7, 9, and 25). The age-adjusted death rate for firearm-related injuries for the total and male populations decreased significantly from 2021 to 2022 by 2.7% and 2.8%, respectively (Tables 6, 11, and 25). For males in 2022, the age-adjusted death rate for firearm-related injuries was 6.0 times the rate for females.

Among race–ethnicity groups—The age-adjusted death rate increased in 2022 from 2021 by 16.2% for the American Indian and Alaska Native population (17.4% for American Indian and Alaska Native males). The rates decreased 7.8% for the total, male, and female Black populations (Tables 11 and 25). The age-adjusted death rates for firearm-related injuries did not change significantly in 2022 from 2021 for other race–ethnicity–sex categories.

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 increased by 1.1 years (from 76.4 years in 2021 to 77.5 years in 2022) primarily because of decreases in mortality from COVID-19, heart disease, cancer, unintentional injuries, and homicide (Table 5). The increase in life expectancy for the total population was slightly offset by increases in mortality from Influenza and pneumonia, perinatal conditions, kidney disease, nutritional deficiencies, and congenital malformations. Life expectancy at birth for males increased by 1.3 years (from 73.5 years in 2021 to 74.8 years in 2022) due to decreases in mortality from COVID-19, heart disease, cancer, homicide, and unintentional injuries. The increase in life expectancy was offset somewhat by increases in mortality from perinatal conditions, Influenza and pneumonia, kidney disease, nutritional deficiencies, and congenital malformations. For the female population, life expectancy increased by 0.9 year (from 79.3 years in 2021 to 80.2 years in 2022) due to decreases in mortality from COVID-19, unintentional injuries, heart disease, diabetes, and cancer. This increase was offset by increases in mortality from Influenza and pneumonia, Chronic lower respiratory diseases, nutritional deficiencies, kidney disease, and perinatal conditions. (For a discussion of the major causes contributing to the change in life expectancy, see Technical Notes.)

Life expectancy for the American Indian and Alaska Native non-Hispanic (subsequently, American Indian and Alaska Native) population increased by 2.2 years to 67.8 years. This increase was primarily due to decreases in mortality from COVID-19, Chronic liver disease and cirrhosis, cancer, suicide, and diabetes. The increase in life expectancy was offset by increases in mortality due to unintentional injuries, homicide, perinatal conditions, Influenza and pneumonia, and congenital malformations. Life expectancy for the American Indian and Alaska Native male population increased 2.3 years to 64.5 years. This increase, primarily due to decreases in mortality from COVID-19, Chronic liver disease and cirrhosis, heart disease, cancer, and suicide, was offset somewhat by increases in mortality from unintentional injuries, perinatal conditions, homicide, legal intervention, and congenital malformation. Life expectancy for the American Indian and Alaska Native female population increased 2.1 years from 69.2 years in 2021 to 71.3 years in 2022. This increase in life expectancy, primarily due to decreases in mortality from COVID-19, Chronic liver disease and cirrhosis, Chronic lower respiratory diseases, diabetes, and Alzheimer disease, was offset somewhat by increases in mortality from Influenza and pneumonia, homicide, heart disease, cancer, and benign neoplasms.

Life expectancy for the Black non-Hispanic (subsequently, Black) population in 2022 increased 1.6 years to 72.8 years. This increase, due to decreases in mortality from COVID-19, heart disease, homicide, diabetes, and Chronic liver disease and

cirrhosis, was offset by increases in mortality from perinatal conditions, kidney disease, congenital malformations, nutritional deficiencies, and legal intervention. Life expectancy for the Black male population in 2022 increased 1.5 years to 69.1 years. This increase, due to decreases in mortality from COVID-19, homicide, heart disease, diabetes, and cancer, was offset by increases in mortality from perinatal conditions, congenital malformations, kidney disease, anemias, and legal intervention. Life expectancy for the Black female population increased 1.5 years in 2022 to 76.5 years due to decreases in mortality from COVID-19, heart disease, diabetes, homicide, and Chronic liver disease and cirrhosis. This increase was offset somewhat by increases in mortality from perinatal conditions, kidney disease, Influenza and pneumonia, aortic aneurysm, and unintentional injuries.

Life expectancy for the Asian non-Hispanic (subsequently, Asian) population increased 0.9 year to 84.4 years. The increase, primarily due to decreases in mortality from COVID-19, stroke, cancer, hypertension, and diabetes, was offset by increases in mortality due to kidney disease, heart disease, congenital malformations, unintentional injuries, and nutritional deficiencies. Life expectancy for the Asian male population increased 1.1 years in 2022 to 82.3 years due to decreases in mortality from COVID-19, stroke, perinatal conditions, diabetes, and cancer. This increase was offset somewhat by increases in mortality from unintentional injuries, kidney disease, congenital malformations, septicemia, and meningitis. Life expectancy for the Asian female population increased by 0.7 year in 2022 to 86.3 years due to decreases in mortality from COVID-19, cancer, stroke, perinatal conditions, and unintentional injuries. This increase was offset somewhat by increases in mortality from Influenza and pneumonia, kidney disease, nutritional deficiencies, pneumonitis, and *C. difficile*.

Life expectancy for the White non-Hispanic (subsequently, White) population increased 0.8 year in 2022 to 77.5 years (Table 4). This increase, due to decreases in mortality from COVID-19, unintentional injuries, heart disease, cancer, and Chronic liver disease and cirrhosis, was offset to some extent by increases in mortality from Influenza and pneumonia, perinatal conditions, nutritional deficiencies, kidney disease, and Chronic lower respiratory diseases. Life expectancy for the White male population increased 1.1 years in 2022 to 75.1 years due to decreases in mortality from COVID-19, unintentional injuries, heart disease, cancer, and suicide. This increase was offset somewhat by increases in mortality from perinatal conditions, Influenza and pneumonia, kidney disease, nutritional deficiencies, and Parkinson disease. Life expectancy for White females increased 0.6 year in 2022 to 80.1 years. This increase, due to decreases in mortality from COVID-19, unintentional injuries, diabetes, cancer, and medical complications, was offset somewhat by increases in mortality from Influenza and pneumonia, Chronic lower respiratory diseases, nutritional deficiencies, perinatal conditions, and kidney disease.

Life expectancy for the Hispanic population increased by 2.2 years to 80.0 years. This increase, due to decreases in mortality from COVID-19, heart disease, diabetes, cancer, and medical complications, was offset by increases in mortality from unintentional injuries, Influenza and pneumonia, congenital malformations, perinatal conditions, and nutritional deficiencies. Life expectancy for the Hispanic male population in 2022 increased 2.4 years to 77.0 years due to decreases in mortality from COVID-19, heart disease, Chronic liver disease, diabetes, and homicide. This increase was offset somewhat by increases in mortality from unintentional injuries, perinatal conditions, congenital malformations, Influenza and pneumonia, and legal intervention. Life expectancy for the Hispanic female population increased by 1.7 years in 2022 to 82.8 years due to decreases in mortality from COVID-19, heart disease, cancer, diabetes, and stroke. This increase was offset somewhat by increases in mortality from Influenza and pneumonia, congenital malformations, chronic liver disease, kidney disease, and homicide.

The difference in life expectancy between the male and female populations decreased 0.4 year in 2022 to 5.4 years (Table 4). The narrowing in the male–female life expectancy gap was due primarily to greater decreases in mortality for the male population from COVID-19, heart disease, homicide, cancer, and Chronic lower respiratory diseases (data not shown).

Injury mortality by mechanism and intent

In 2022, a total of 307,785 deaths were classified as injury-related (Table 12). Injury data are presented using the external cause-of-injury mortality matrix for ICD–10, as jointly conceived by the International Collaborative Effort on Injury Statistics and the Injury Control and Emergency Health Services section of the American Public Health Association (27,28). 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 (such as 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 2022—poisoning, firearm, fall, and motor-vehicle traffic—accounted for 82.3% of all injury deaths.

A total of 112,728 deaths occurred as the result of poisonings in 2022, accounting for 36.6% of all injury deaths (Table 12). The age-adjusted death rate for poisoning did not change significantly from 2021 to 2022. Most poisoning deaths were either unintentional (91.3%) or suicides (5.5%). However, 3.0% of poisoning deaths were of undetermined intent. The age-adjusted death rate for unintentional poisoning was unchanged statistically from 2021 to 2022.

Firearm injuries resulted in 48,204 deaths in 2022 (Table 12), accounting for 15.7% of all injury deaths. The age-adjusted death rate for firearm injuries (all intents) in 2022 decreased 2.7% from 2021. The two major component causes of firearm

injury deaths in 2022 were suicide (56.1%) and homicide (40.8%). The age-adjusted death rate for firearm suicide did not change significantly from 2021 to 2022. The age-adjusted rate for firearm homicide decreased 7.5%, from 6.7 in 2021 to 6.2 in 2022.

A total of 47,984 people died as the result of falls in 2022, accounting for 15.6% of all injury deaths (Table 12). The age-adjusted death rate for falls in 2022 decreased 1.7%, from 11.8 in 2021 to 11.6 in 2022. The overwhelming majority of fall-related deaths (97.2%) were unintentional.

Motor vehicle traffic-related injuries in 2022 resulted in 44,534 deaths, accounting for 14.5% of all injury deaths (Table 12). The age-adjusted death rate for these injuries decreased 3.0%, from 13.3 in 2021 to 12.9 in 2022.

Marital status

For those age 15 and older, the number of deaths in 2022 among people who were married was 1,170,668; widowed, 998,284; divorced, 576,726; and never married, 474,143 (Table 13); see Technical Notes. Those who were widowed had the highest age-adjusted death rate (1,880.3 per 100,000 U.S. standard population), followed by never-married people (1,623.5), divorced people (1,514.4), and married people (790.4). Never-married people had an age-adjusted death rate 45.4% higher than those ever-married (more than 2 times the rate of currently married people and 7.2% higher than divorced people). Widowed people had a rate more than twice that of married people, 24.2% higher than divorced people, and 15.8% higher than never-married people. Divorced people had a rate 1.9 times the rate of those who were married at the time of death.

For all age groups 15 and older, age-specific death rates for married people were much lower than those for never-married people. For those ages 15–24, divorced people had the highest death rate, whereas for those ages 25–34, 35-44, and 75 and older, widowed people had the highest death rate. Never-married people had the highest death rate among those ages 45–54, 55–64, and 65–74 (Table 13).

For each marital status group in 2022, males had higher age-adjusted death rates than females, ranging from 55.9% greater for those never married and widowed to 69.5% higher for those divorced at the time of death (Table 13).

Educational attainment

Age-specific and age-adjusted death rates are shown by educational attainment for age groups in the range of 25–64 years (Table 14). In 2022, a total of 358,700 decedents ages 25–64 had received a high school diploma or equivalent, compared with 271,100 who had completed some college or collegiate degree and 137,271 who had achieved less than a high school diploma or equivalent. In 2022, age-adjusted death rates for those with less than a high school diploma or GED (695.7 per 100,000 U.S. standard population) and for those with a high school diploma or GED (724.4) were more than 3 times the rate for those with some college or collegiate degree (220.3).

Injury at work

Deaths, crude death rates, and age-adjusted death rates for injury at work are shown for those age 15 and older (Tables 15 and 16). Age-adjusted death rates for injury at work were computed using age-specific death rates and the 2000 U.S. standard population for those age 15 and older; see "Computing rates" in Technical Notes. Information on deaths attributed to injuries at work is derived from a separate item on the death certificate that asks the medical certifier whether the death resulted from an injury sustained at work. This item is on the death certificate of all states.

State of residence

Mortality patterns varied considerably by state (Tables 17 and 20). The state with the highest age-adjusted death rate in 2022 was West Virginia (1,115.6 deaths per 100,000 U.S. standard population), with a rate 39.7% above the national rate (798.8). The state with the lowest age-adjusted death rate was Hawaii (615.9), with a rate 22.9% below the national rate. The age-adjusted death rate for West Virginia was 81.1% higher than the rate for Hawaii.

Variations in mortality by state were associated with differences in socioeconomic status, racial and ethnic composition, as well as with differences in risk of specific causes of death (29).

Infant mortality

In 2022, a total of 20,553 deaths occurred in children younger than age 1 year (Tables C, D, 19, and 20). This number represents 633 more infant deaths in 2022 than in 2021. The ratio of male-to-female IMRs was 1.2, the same as in 2021. IMR was 5.60 infant deaths per 1,000 live births, the neonatal mortality rate (deaths of infants ages 0–27 days per 1,000 live births) was 3.58, and the postneonatal mortality rate (deaths of infants ages 28 days–11 months per 1,000 live births) was 2.03 in 2022 (Figure 5 and Tables C and 18; see Technical Notes for information on alternative data sources).

The infant, neonatal, and postneonatal mortality rates increased significantly by 2.9%, 2.9%, and 4.1% from 2021 to 2022, respectively.

The 10 leading causes of infant death in 2022 accounted for 65.2% 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. Accidents (unintentional injuries)
5. Newborn affected by maternal complications of pregnancy (maternal complications)

Table C. Number of infant, neonatal, and postneonatal deaths and mortality rate, by sex: United States, 2021–2022

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

Age and sex	2022		2021		Percent change[1] from 2021 to 2022
	Number	Rate	Number	Rate	
Infant					
Total	20,553	5.60	19,920	5.44	2.9
Male	11,371	6.07	10,909	5.82	4.3
Female	9,182	5.12	9,011	5.03	1.8
Neonatal					
Total	13,125	3.58	12,768	3.48	2.9
Male	7,130	3.80	6,899	3.68	3.3
Female	5,995	3.34	5,869	3.28	1.8
Postneonatal					
Total	7,428	2.03	7,152	1.95	4.1
Male	4,241	2.26	4,010	2.14	5.6
Female	3,187	1.78	3,142	1.75	1.7

[1]Based on a comparison of 2022 and 2021 mortality rates.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

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. Intrauterine hypoxia and birth asphyxia
10. Diseases of the circulatory system

The 10 leading causes of infant death remained unchanged in 2022 from 2021, although two causes changed ranks (30). Intrauterine hypoxia and birth asphyxia, the 10th leading cause of infant death in 2021, became the 9th leading cause in 2022, while Diseases of the circulatory system, the 9th leading cause in 2021, became the 10th leading cause in 2022. Among the 10 leading causes, IMR increased 8.9% from 2021 for maternal complications and 13.8% for bacteria sepsis of newborn. Changes in rates among the other leading causes of infant death were not statistically significant (Table D).

IMRs 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. IMRs for the Hispanic population are

Table D. Number of infant deaths, percentage of total infant deaths, and infant mortality rate for 2022, and percent change in infant mortality rates from 2021 to 2022 for the 10 leading causes of infant death in 2022: United States

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

Rank[1]	Cause of death (based on *International Classification of Diseases, 10h Revision*)	Number	Percent of total deaths[2]	Rate	Percent change[3] from 2021 to 2022
…	All causes.	20,553	100.0	560.4	3.1
1	Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	3,970	19.3	108.2	0.0
2	Disorders related to short gestation and low birth weight, not elsewhere classified . . . . (P07)	2,884	14.0	78.6	-2.2
3	Sudden infant death syndrome . . . . (R95)	1,529	7.4	41.7	4.8
4	Accidents (unintentional injuries). . . . . (V01–X59)	1,354	6.6	36.9	3.7
5	Newborn affected by maternal complications of pregnancy. . . . . (P01)	1,215	5.9	33.1	8.9
6	Newborn affected by complications of placenta, cord and membranes . . . . (P02)	649	3.2	17.7	-3.3
7	Bacterial sepsis of newborn. . . . . (P36)	636	3.1	17.3	13.8
8	Respiratory distress of newborn . . . . (P22)	455	2.2	12.4	9.7
9	Intrauterine hypoxia and birth asphyxia. . . . . (P20–P21)	362	1.8	9.9	1.0
10	Diseases of the circulatory system. . . . . (I00–I99)	356	1.7	9.7	-11.8
…	All other causes . . . . (residual)	7,143	34.8	194.8	…

… Category not applicable.
[1]Based on number of deaths; see Technical Notes in this report.
[2]Percentages may not add to 100 due to rounding.
[3]Based on a comparison of the 2022 infant mortality rate with the 2021 infant mortality rate.

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

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Figure 5. Infant, neonatal, and postneonatal mortality rates: United States, 1960–2022

NOTE: Rates are infant (younger than 1 year), neonatal (younger than 28 days), and postneonatal (28 days–11 months) deaths per 1,000 live births in specified group.
SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.
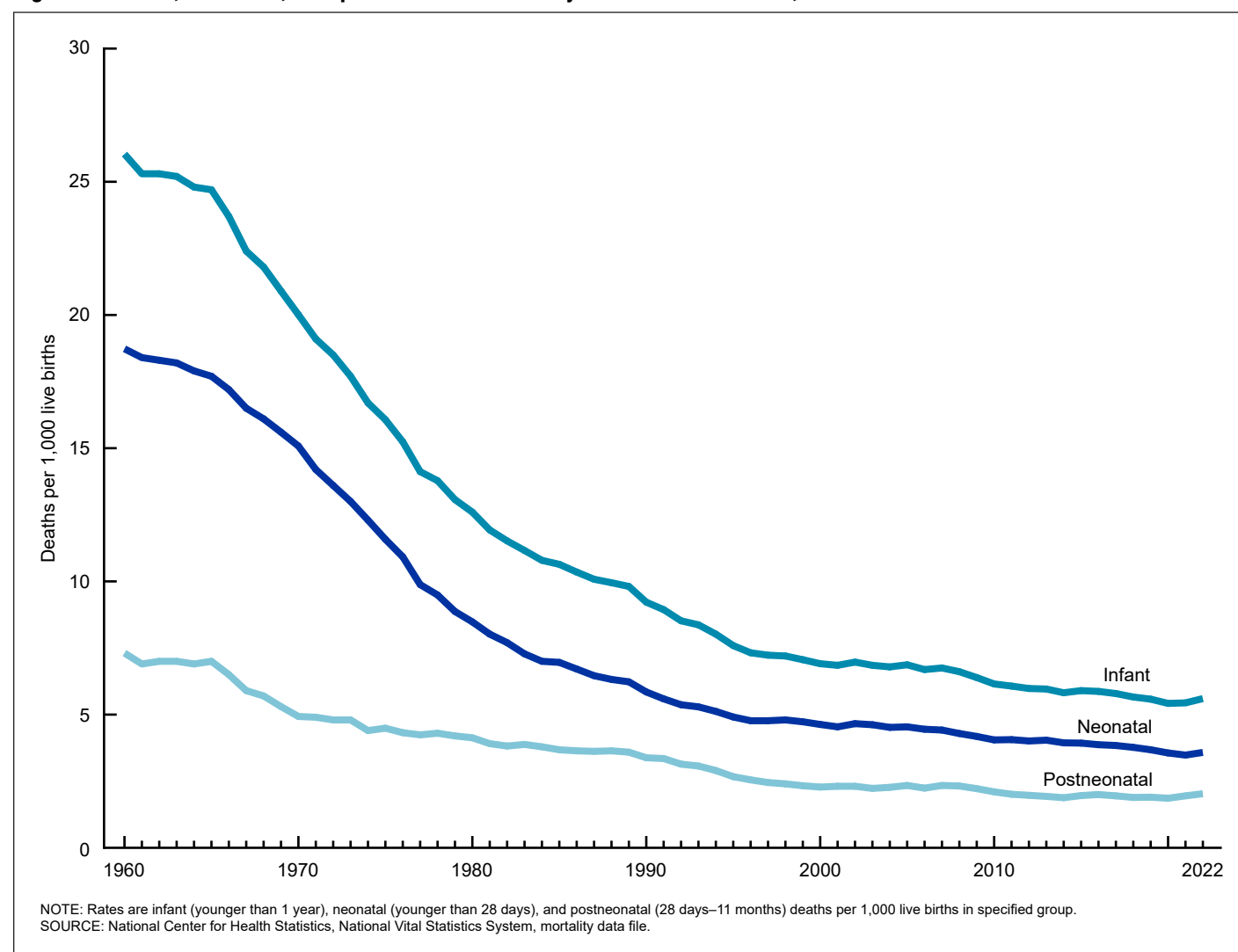
not adjusted for misclassification; see Technical Notes. Because these rates are not adjusted, misclassification of Hispanic origin should be considered when interpreting rate disparities between Hispanic and non-Hispanic populations (16).

In 2022, the IMR for White non-Hispanic infants was 4.39 per 1,000 live births, an increase of 4.5% from 4.20 in 2021. In 2022, the IMR was 5.08 for Hispanic infants, 8.16 for American Indian and Alaska Native non-Hispanic infants, 2.85 for Asian non-Hispanic infants, 11.34 for Black non-Hispanic infants, and 8.79 for Native Hawaiian or Other Pacific Islander non-Hispanic infants (Table 18). The changes in IMRs in 2022 from 2021 for these groups were not statistically significant.

Maternal mortality

In 2022, a total of 817 women died of maternal causes in the United States—388 fewer deaths than in 2021 (Table 21) (30). The overall maternal mortality rate decreased 32.2%, from 32.9 deaths per 100,000 live births in 2021 to 22.3 in 2022. COVID-19 was listed on the death certificate as a contributing cause of death for 10.8% of maternal deaths in 2022 (14). The maternal

mortality rate in 2022 was highest for Black non-Hispanic (subsequently, Black) women (49.5), followed by White non-Hispanic (subsequently, White) (19.0), Hispanic (16.9), and Asian non-Hispanic (subsequently, Asian) (13.2) women. The maternal mortality rate decreased 39.6% for Hispanic women (from 28.0 in 2021 to 16.9 in 2022), 29.2% for Black women (from 69.9 in 2021 to 49.5 in 2022) and 28.6% for White women (from 26.6 to 19.0). The change in maternal mortality rates for Asian women was not significant. In 2022, the maternal mortality rates for American Indian and Alaska Native women and Native Hawaiian or Other Pacific Islander women did not meet National Center for Health Statistics standards of reliability because the numbers of deaths are too low.

Maternal deaths and death rates shown in this report are based on the new method for coding maternal deaths that was adopted by the National Center for Health Statistics starting with the 2018 data year (30) (Technical Notes). This method restricts application of the pregnancy checkbox to decedents ages 10–44 for coding cause of death to a maternal cause when the certificate has no mention of a maternal-related condition but has a positive checkbox entry (30). For women age 45 and older, the checkbox

is used in coding cause of death only if a positive checkbox entry is accompanied by a mention of a maternal-related condition as a cause of death. Maternal deaths include deaths of women while pregnant or within 42 days of being pregnant, from any cause related to or aggravated by the pregnancy but exclude deaths from external causes (that is, accidents, homicides, and suicides); for more information, see "Maternal Mortality in the United States: Changes in Coding, Publication, and Data Release, 2018" (32) and Technical Notes.

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List of Detailed Tables

Table 1. Number of deaths, death rate, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000, and 2010–2022

[Excludes deaths of nonresidents of the United States. 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 in this report]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022	3,279,857	1,719,250	1,560,607	984.1	1,040.2	928.9	798.8	954.5	666.1
2021	3,464,231	1,838,108	1,626,123	1,043.8	1,118.2	970.8	879.7	1,048.0	733.3
2020	3,383,729	1,769,884	1,613,845	1,027.0	1,090.8	965.1	835.4	998.3	695.1
2019	2,854,838	1,473,823	1,381,015	869.7	911.7	829.0	715.2	846.7	602.7
2018	2,839,205	1,458,469	1,380,736	867.8	905.2	831.6	723.6	855.5	611.3
2017	2,813,503	1,439,111	1,374,392	863.8	897.2	831.4	731.9	864.5	619.7
2016	2,744,248	1,400,232	1,344,016	849.3	880.2	819.3	728.8	861.0	617.5
2015	2,712,630	1,373,404	1,339,226	844.0	868.0	820.7	733.1	863.2	624.2
2014	2,626,418	1,328,241	1,298,177	823.7	846.4	801.7	724.6	855.1	616.7
2013	2,596,993	1,306,034	1,290,959	821.5	839.1	804.4	731.9	863.6	623.5
2012	2,543,279	1,273,722	1,269,557	810.2	824.5	796.4	732.8	865.1	624.7
2011	2,515,458	1,254,978	1,260,480	807.3	818.7	796.3	741.3	875.3	632.4
2010	2,468,435	1,232,432	1,236,003	799.5	812.0	787.4	747.0	887.1	634.9
2000	2,403,351	1,177,578	1,225,773	854.0	853.0	855.0	869.0	1,053.8	731.4
1990	2,148,463	1,113,417	1,035,046	863.8	918.4	812.0	938.7	1,202.8	750.9
1980	1,989,841	1,075,078	914,763	878.3	976.9	785.3	1,039.1	1,348.1	817.9
1970	1,921,031	1,078,478	842,553	945.3	1,090.3	807.8	1,222.6	1,542.1	971.4
1960	1,711,982	975,648	736,334	954.7	1,104.5	809.2	1,339.2	1,609.0	1,105.3
1950	1,452,454	827,749	624,705	963.8	1,106.1	823.5	1,446.0	1,674.2	1,236.0
1940	1,417,269	791,003	626,266	1,076.4	1,197.4	954.6	1,785.0	1,976.0	1,599.4
Hispanic[4]									
2022	275,684	155,240	120,444	433.0	481.0	383.7	614.7	748.8	498.4
2021	315,664	181,195	134,469	503.9	571.3	434.7	724.7	884.9	582.7
2020	305,708	175,585	130,123	498.6	567.8	428.2	723.6	903.8	570.1
2019	212,397	117,683	94,714	350.7	384.9	315.7	523.8	633.2	430.7
2018	204,719	113,045	91,674	341.9	373.9	309.3	524.1	633.1	431.7
2017	197,249	108,579	88,670	334.6	364.6	304.0	524.7	631.8	434.2
2016	188,254	103,532	84,722	327.6	356.8	297.7	525.8	631.8	436.4
2015	179,457	98,170	81,287	317.1	343.2	290.4	525.3	628.9	438.3
2014	169,387	92,474	76,913	305.8	330.1	281.0	523.3	626.8	437.5
2013	163,241	88,880	74,361	301.9	323.7	279.4	535.4	639.8	448.6
2012	156,419	85,238	71,181	295.0	316.5	272.7	539.1	643.9	452.5
2011	149,635	81,887	67,748	287.5	309.7	264.6	540.7	647.3	452.8
2010	144,490	79,622	64,868	286.2	310.8	260.9	558.6	677.7	463.4
2000	107,254	60,172	47,082	303.8	331.3	274.6	665.7	818.1	546.0
Non-Hispanic, single race[5]									
American Indian and Alaska Native:									
2022	23,613	12,721	10,892	975.4	1,062.4	890.2	947.9	1,084.3	816.1
2021	26,972	14,724	12,248	1,100.0	1,216.9	986.2	1,109.2	1,282.7	946.6
2020	24,725	13,431	11,294	1,016.5	1,123.4	913.2	1,036.2	1,205.9	881.5
2019	18,057	9,732	8,325	741.6	812.1	673.3	782.5	901.9	673.3
2018	17,790	9,678	8,112	735.9	813.5	660.8	790.8	918.7	673.1
Asian:									
2022	89,591	46,137	43,454	441.9	472.3	413.6	417.5	501.7	350.7
2021	92,432	48,386	44,046	469.5	511.7	430.5	461.7	554.9	386.3
2020	91,175	47,699	43,476	470.8	515.8	429.6	457.7	557.4	378.5
2019	70,532	35,914	34,618	373.1	398.7	349.8	372.8	442.4	317.2
2018	68,768	35,089	33,679	367.2	393.4	343.3	381.2	454.1	324.1
Black:									
2022	411,934	219,538	192,396	979.2	1,085.4	880.8	1,002.8	1,257.5	809.0
2021	449,764	238,599	211,165	1,074.5	1,185.8	971.4	1,118.0	1,374.0	917.2
2020	449,213	237,703	211,510	1,084.3	1,200.0	978.4	1,119.0	1,399.0	905.2
2019	346,677	181,363	165,314	842.5	921.8	769.9	884.0	1,092.8	724.9
2018	341,408	177,958	163,450	834.7	909.8	765.9	892.6	1,102.8	733.7

See footnotes at end of table.

Table 1. Number of deaths, death rate, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000, and 2010–2022—Con.

[Excludes deaths of nonresidents of the United States. 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 in this report]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[5]—Con.									
Native Hawaiian or Other Pacific Islander:									
2022	4,592	2,461	2,131	722.1	765.3	677.9	782.0	859.5	705.4
2021	5,223	2,906	2,317	834.0	917.5	748.6	924.3	1,042.8	806.0
2020	4,439	2,489	1,950	723.5	804.6	641.1	821.3	947.9	699.8
2019	3,491	1,938	1,553	585.8	646.5	524.4	679.0	769.0	589.5
2018	3,277	1,786	1,491	558.9	605.4	511.8	675.7	758.1	597.3
White:									
2022	2,448,093	1,267,526	1,180,567	1,247.6	1,299.7	1,196.1	822.2	972.1	692.7
2021	2,548,809	1,337,385	1,211,424	1,294.9	1,368.8	1,222.1	893.9	1,055.6	751.4
2020	2,484,072	1,278,612	1,205,460	1,262.4	1,317.7	1,208.6	834.7	985.0	703.1
2019	2,183,844	1,115,767	1,068,077	1,106.8	1,146.6	1,068.1	739.9	868.8	627.4
2018	2,182,552	1,108,848	1,073,704	1,104.8	1,138.2	1,072.3	748.7	878.0	636.5

[1]Rates are on an annual basis per 100,000 population in specified group; see Technical Notes.
[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.
[3]Includes origins and races not shown separately; see Technical Notes.
[4]Includes people of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.
[5]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 2. Number of deaths and death rate by age, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 2022

[Rates are 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 in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race3 should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Hispanic origin and race and sex	All ages	Age group											Age not stated	Age-adjusted rate[2]
		Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older		
		Number												
Total.	3,279,857	20,553	4,156	6,239	35,232	74,369	111,605	183,284	417,541	668,581	824,903	933,291	103	...
Male	1,719,250	11,371	2,353	3,587	25,637	52,511	73,486	114,847	254,278	384,985	427,507	368,601	87	...
Female	1,560,607	9,182	1,803	2,652	9,595	21,858	38,119	68,437	163,263	283,596	397,396	564,690	16	...
Single race[3]	3,260,336	19,576	3,959	6,001	34,287	72,863	110,088	181,423	414,713	665,106	821,717	930,500	103	...
Male	1,708,400	10,857	2,245	3,452	24,988	51,467	72,538	113,703	252,590	383,065	425,888	367,520	87	...
Female	1,551,936	8,719	1,714	2,549	9,299	21,396	37,550	67,720	162,123	282,041	395,829	562,980	16	...
Two or more races[4]	19,521	977	197	238	945	1,506	1,517	1,861	2,828	3,475	3,186	2,791	–	...
Male	10,850	514	108	135	649	1,044	948	1,144	1,688	1,920	1,619	1,081	–	...
Female	8,671	463	89	103	296	462	569	717	1,140	1,555	1,567	1,710	–	...
Hispanic, total[5].	275,684	4,765	869	1,386	8,035	13,791	17,794	25,143	39,748	49,780	54,345	60,018	10	...
Male	155,240	2,612	466	787	6,040	10,542	12,875	16,955	25,576	28,932	27,163	23,283	9	...
Female.	120,444	2,153	403	599	1,995	3,249	4,919	8,188	14,172	20,848	27,182	36,735	1	...
Hispanic, single race[3]	273,099	4,552	827	1,356	7,892	13,568	17,563	24,896	39,386	49,394	53,974	59,681	10	...
Male	153,772	2,502	442	769	5,938	10,380	12,727	16,807	25,358	28,709	26,974	23,157	9	...
Female.	119,327	2,050	385	587	1,954	3,188	4,836	8,089	14,028	20,685	27,000	36,524	1	...
American Indian and Alaska Native	1,705	41	11	8	90	143	158	180	290	330	246	208	–	...
Male	1,001	25	10	3	58	99	118	123	175	193	108	89	–	...
Female.	704	16	1	5	32	44	40	57	115	137	138	119	–	...
Asian.	886	39	12	12	43	54	53	72	109	156	182	154	–	...
Male	486	17	7	9	28	41	34	47	69	88	86	60	–	...
Female.	400	22	5	3	15	13	19	25	40	68	96	94	–	...
Black.	5,353	305	62	54	257	440	438	544	714	880	808	851	–	...
Male	3,137	165	28	34	192	332	322	364	436	515	422	327	–	...
Female.	2,216	140	34	20	65	108	116	180	278	365	386	524	–	...
Native Hawaiian or Other Pacific Islander	315	10	6	4	22	30	23	33	55	54	42	36	–	...
Male	191	7	3	1	16	24	17	25	38	35	15	10	–	...
Female.	124	3	3	3	6	6	6	8	17	19	27	26	–	...
White	264,840	4,157	736	1,278	7,480	12,901	16,891	24,067	38,218	47,974	52,696	58,432	10	...
Male	148,957	2,288	394	722	5,644	9,884	12,236	16,248	24,640	27,878	26,343	22,671	9	...
Female.	115,883	1,869	342	556	1,836	3,017	4,655	7,819	13,578	20,096	26,353	35,761	1	...
Hispanic, two or more races[4]	2,585	213	42	30	143	223	231	247	362	386	371	337	–	...
Male	1,468	110	24	18	102	162	148	148	218	223	189	126	–	...
Female.	1,117	103	18	12	41	61	83	99	144	163	182	211	–	...

See footnotes at end of table.

Table 2. Number of deaths and death rate by age, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are 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 in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race3 should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Hispanic origin and race and sex	All ages	Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated	Age-adjusted rate[2]
							Number—Con.							
Non-Hispanic, total	2,994,727	15,560	3,275	4,849	27,152	60,421	93,436	157,417	375,693	615,996	768,717	872,167	44	...
Male	1,557,750	8,627	1,881	2,796	19,568	41,863	60,349	97,367	227,139	354,078	399,232	344,814	36	...
Female	1,436,977	6,933	1,394	2,053	7,584	18,558	33,087	60,050	148,554	261,918	369,485	527,353	8	...
Non-Hispanic, single race[3]	2,977,823	14,798	3,121	4,641	26,350	59,140	92,154	155,807	373,233	612,917	765,903	869,715	44	...
Male	1,548,383	8,224	1,798	2,679	19,021	40,982	59,552	96,374	225,671	352,385	397,802	343,859	36	...
Female	1,429,440	6,574	1,323	1,962	7,329	18,158	32,602	59,433	147,562	260,532	368,101	525,856	8	...
American Indian and Alaska Native	23,613	210	64	110	664	1,729	2,302	2,781	4,298	4,712	4,053	2,690	–	...
Male	12,721	120	32	61	447	1,097	1,461	1,663	2,442	2,491	1,923	984	–	...
Female	10,892	90	32	49	217	632	841	1,118	1,856	2,221	2,130	1,706	–	...
Asian	89,591	624	120	193	823	1,580	2,595	4,942	8,971	16,293	22,628	30,822	–	...
Male	46,137	356	70	110	569	1,097	1,661	3,071	5,562	9,376	11,746	12,519	–	...
Female	43,454	268	50	83	254	483	934	1,871	3,409	6,917	10,882	18,303	–	...
Black	411,934	5,800	1,116	1,502	9,366	17,383	23,234	35,376	73,375	96,857	80,186	67,734	5	...
Male	219,538	3,230	634	874	7,180	12,282	14,840	21,498	43,345	54,062	38,510	23,078	5	...
Female	192,396	2,570	482	628	2,186	5,101	8,394	13,878	30,030	42,795	41,676	44,656	–	...
Native Hawaiian or Other Pacific Islander	4,592	89	26	26	92	207	347	559	889	1,057	841	459	–	...
Male	2,461	49	18	14	71	141	219	315	501	544	401	188	–	...
Female	2,131	40	8	12	21	66	128	244	388	513	440	271	–	...
White	2,448,093	8,075	1,795	2,810	15,405	38,241	63,676	112,149	285,700	493,998	658,195	768,010	39	...
Male	1,267,526	4,469	1,044	1,620	10,754	26,365	41,371	69,827	173,821	285,912	345,222	307,090	31	...
Female	1,180,567	3,606	751	1,190	4,651	11,876	22,305	42,322	111,879	208,086	312,973	460,920	8	...
Non-Hispanic, two or more races[4]	16,904	762	154	208	802	1,281	1,282	1,610	2,460	3,079	2,814	2,452	–	...
Male	9,367	403	83	117	547	881	797	993	1,468	1,693	1,430	955	–	...
Female	7,537	359	71	91	255	400	485	617	992	1,386	1,384	1,497	–	...
Not stated or not classifiable origin[6]	9,446	228	12	4	45	157	375	724	2,100	2,805	1,841	1,106	49	...
Male	6,260	132	6	4	29	106	262	525	1,563	1,975	1,112	504	42	...
Female	3,186	96	6	–	16	51	113	199	537	830	729	602	7	...

See footnotes at end of table.

Table 2. Number of deaths and death rate by age, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are 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 in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race3 should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Hispanic origin and race and sex	All ages	Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated	Age-adjusted rate[2]
												Rate[7]		
Total[8]	984.1	558.0	28.0	15.3	79.5	163.4	255.4	453.3	992.1	1,978.7	4,708.2	14,389.6	…	798.8
Male	1,040.2	603.9	31.0	17.1	113.0	226.4	332.2	566.3	1,230.1	2,419.7	5,527.0	16,139.6	…	954.5
Female	928.9	510.0	24.8	13.3	44.3	98.0	176.7	339.6	762.4	1,586.3	4,061.0	13,438.5	…	666.1
Single race[3]	1,008.7	569.7	28.5	15.6	81.0	165.5	257.9	456.9	999.0	1,990.6	4,736.1	14,482.1	…	804.5
Male	1,065.9	617.9	31.6	17.5	115.4	229.2	335.3	570.4	1,238.1	2,434.4	5,560.3	16,254.3	…	961.5
Female	952.4	519.3	25.3	13.6	45.0	99.2	178.4	342.5	767.9	1,595.6	4,084.7	13,519.9	…	670.6
Two or more races[5]	193.8	395.5	20.2	9.7	46.8	102.3	150.1	257.7	495.5	922.6	1,868.5	4,597.1	…	346.7
Male	216.5	408.4	21.7	10.8	63.3	141.8	194.7	331.5	623.7	1,096.1	2,147.8	4,750.2	…	409.6
Female	171.4	382.1	18.7	8.6	29.8	62.8	108.6	190.2	379.9	771.8	1,647.2	4,505.3	…	291.4
Hispanic, total[5]	433.0	477.4	22.2	13.1	74.4	142.1	196.3	327.7	702.5	1,522.8	3,682.6	11,107.1	…	614.7
Male	481.0	514.1	23.4	14.6	109.3	209.7	270.9	432.1	905.9	1,900.2	4,368.6	12,379.5	…	748.8
Female	383.7	439.4	21.0	11.6	37.8	69.4	114.0	218.4	499.9	1,193.7	3,183.0	10,427.8	…	498.4
Hispanic, single race[3]	443.4	480.5	22.3	13.5	75.9	144.3	199.0	331.7	710.4	1,540.2	3,721.6	11,208.1	…	621.4
Male	492.3	518.9	23.4	15.0	111.6	213.1	274.8	437.5	915.8	1,920.8	4,413.5	12,496.2	…	757.1
Female	393.1	440.8	21.1	11.9	38.5	70.4	115.3	220.8	505.5	1,208.0	3,217.6	10,520.6	…	503.7
American Indian and Alaska Native	86.9	97.4	*	*	28.3	49.5	57.2	79.9	179.5	390.0	791.9	2,210.4	…	143.9
Male	98.1	116.8	*	*	35.6	65.1	78.0	101.6	207.8	459.7	766.1	2,594.8	…	165.7
Female	74.8	*	*	*	20.7	32.2	32.0	54.7	148.7	321.4	813.2	1,990.0	…	122.9
Asian	130.7	256.2	*	*	39.2	54.4	58.4	98.5	212.6	546.0	1,563.7	4,075.2	…	229.5
Male	142.8	*	*	*	49.5	82.2	73.5	129.3	277.5	674.3	1,795.4	4,662.0	…	275.1
Female	118.5	294.0	*	*	*	*	*	68.0	151.5	438.2	1,401.7	3,772.1	…	192.8
Black	160.8	409.0	22.1	8.3	46.1	87.4	96.2	159.2	287.8	625.8	1,364.8	4,272.9	…	257.3
Male	190.5	435.3	19.6	10.3	67.3	129.3	144.7	226.0	374.1	812.0	1,741.5	4,890.8	…	329.7
Female	131.7	381.9	24.6	6.3	23.9	43.8	49.8	99.7	211.4	472.9	1,103.7	3,960.7	…	198.9
Native Hawaiian or Other Pacific Islander	129.7	*	*	*	58.7	82.2	62.0	124.4	308.8	617.3	1,259.4	3,543.3	…	230.5
Male	152.3	*	*	*	*	124.0	*	180.6	426.2	849.5	*	*	…	253.8
Female	105.6	*	*	*	*	*	*	*	*	*	1,416.6	4,037.3	…	198.6
White	478.3	513.3	23.1	14.4	79.8	152.3	212.1	351.9	754.5	1,629.3	3,917.7	11,724.9	…	655.0
Male	530.0	554.9	24.3	15.9	117.7	225.0	292.0	463.0	972.2	2,031.8	4,649.1	13,064.0	…	798.1
Female	424.9	470.1	21.9	12.8	40.1	74.0	123.4	234.9	536.4	1,278.0	3,385.4	11,009.4	…	530.6
Hispanic, two or more races[4]	124.5	419.8	21.3	6.0	35.4	72.6	95.1	146.5	317.9	622.1	1,458.5	4,279.4	…	258.4
Male	140.9	426.1	23.8	*	49.7	103.6	121.9	178.7	402.7	798.7	1,781.7	4,558.6	…	311.6
Female	107.9	413.2	*	*	20.7	40.4	68.3	115.4	241.0	477.6	1,227.3	4,128.4	…	214.1

See footnotes at end of table.

Table 2. Number of deaths and death rate by age, and age-adjusted death rate, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are 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 in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race3 should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

		Age group											Age not stated	Age-adjusted rate[2]
Hispanic origin and race and sex	All ages	Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older		
							Rate[7]—Con.							
Non-Hispanic, total	1,110.7	579.5	29.9	16.0	80.9	168.8	269.8	480.5	1,031.3	2,018.4	4,791.1	14,669.3	…	820.4
Male	1,171.2	627.5	33.6	18.0	114.0	230.5	347.5	595.3	1,272.6	2,460.9	5,612.7	16,453.0	…	977.4
Female	1,051.8	529.1	26.1	13.9	46.3	105.3	191.7	366.1	799.6	1,623.7	4,136.8	13,698.3	…	686.9
Non-Hispanic, single race[3]	1,138.2	594.6	30.7	16.4	82.5	170.8	272.2	483.8	1,037.6	2,029.2	4,817.1	14,759.3	…	825.8
Male	1,200.0	645.1	34.6	18.4	116.4	233.1	350.3	598.9	1,279.9	2,474.5	5,643.9	16,565.5	…	984.0
Female	1,078.1	541.5	26.7	14.2	47.0	106.5	193.4	368.9	804.7	1,632.0	4,158.7	13,777.0	…	691.3
American Indian and Alaska Native	975.4	833.5	60.0	33.7	182.9	466.8	734.7	1,003.1	1,467.7	2,198.2	4,134.7	8,138.4	…	947.9
Male	1,062.4	932.8	58.9	36.6	242.2	581.5	930.0	1,209.6	1,741.4	2,515.4	4,365.5	7,885.2	…	1,084.3
Female	890.2	729.8	61.1	30.6	121.6	347.7	538.3	800.0	1,216.1	1,925.8	3,946.3	8,292.0	…	816.1
Asian	441.9	306.0	14.1	8.4	33.4	49.2	78.6	173.7	398.9	962.5	2,735.3	9,206.1	…	417.5
Male	472.3	338.1	16.0	9.3	45.7	69.1	104.8	228.0	531.6	1,249.6	3,256.5	10,082.0	…	501.7
Female	413.6	271.7	12.2	7.4	20.8	29.8	54.4	124.9	283.5	733.9	2,332.5	8,689.8	…	350.7
Black	979.2	1,066.7	52.8	26.6	153.8	264.9	412.6	701.8	1,468.2	2,791.3	5,429.7	13,311.4	…	1,002.8
Male	1,085.4	1,170.5	59.2	30.6	233.3	374.0	545.0	899.8	1,866.7	3,600.0	6,722.8	15,380.3	…	1,257.5
Female	880.8	959.6	46.2	22.6	72.5	155.7	288.6	523.4	1,122.4	2,174.3	4,610.2	12,446.1	…	809.0
Native Hawaiian or Other Pacific Islander	722.1	1,100.4	76.7	29.2	103.2	207.0	349.9	731.0	1,310.0	2,322.6	4,213.6	6,699.8	…	782.0
Male	765.3	1,166.7	*	*	155.4	274.5	428.7	809.4	1,490.9	2,496.6	4,306.7	6,934.7	…	859.5
Female	677.9	1,028.8	*	*	48.3	135.7	266.1	649.8	1,132.5	2,162.8	4,132.2	6,545.9	…	705.4
White	1,247.6	472.8	25.4	14.0	67.2	156.8	259.7	468.0	1,007.3	1,993.4	4,883.6	15,332.2	…	822.2
Male	1,299.7	509.9	28.8	15.7	91.3	211.4	331.3	573.3	1,233.6	2,409.1	5,695.4	17,191.0	…	972.1
Female	1,196.1	433.8	21.8	12.2	41.8	99.7	185.4	359.1	783.8	1,611.3	4,220.1	14,301.9	…	692.7
Non-Hispanic, two or more races[4]	211.5	388.2	19.9	10.7	49.7	110.0	167.0	290.9	538.5	978.7	1,939.7	4,640.7	…	366.8
Male	235.9	402.8	20.9	11.7	66.7	151.9	218.1	378.7	678.0	1,149.8	2,207.8	4,776.7	…	433.0
Female	187.4	373.1	18.7	9.5	32.1	68.4	120.6	211.9	412.8	828.3	1,723.5	4,557.9	…	308.2

… Category not applicable.

– Quantity zero.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

[1]Death rates for "Younger than 1" (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

[2]For method of computation, see Technical Notes.

[3]Only one race was reported on the death certificate; see Technical Notes.

[4]Two or more races were reported on the death certificate; see Technical Notes.

[5]Includes people of Hispanic origin of any race; see Technical Notes.

[6]Includes origin not stated or not classifiable; see Technical Notes.

[7]Data for age not stated included in "All ages" but not distributed among age groups.

[8]Includes deaths with origin not stated and origin not classifiable; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 3. Number of deaths and death rate by age, and age-adjusted death rate, by specified Hispanic origin and sex: United States, 2022

[Rates are per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Populations used for computing death rates for Hispanic total are postcensal estimates based on the 2010 census estimated as of July 1, 2022; populations used for computing death rates for Mexican, Puerto Rican, Cuban, Central American, South American, Dominican, and Other and unknown Hispanic are estimates based on the 2022 1-year American Community Survey adjusted to control totals. The control totals are 2010-based postcensal estimates for the United States for July 1, 2022; see Technical Notes. Hispanic origin is reported separately on the death certificate. People of Hispanic origin may be of any race. Data for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys; see Technical Notes]

Hispanic origin and sex	All ages	Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated	Age-adjusted rate[2]
							Number							
Hispanic	275,684	4,765	869	1,386	8,035	13,791	17,794	25,143	39,748	49,780	54,345	60,018	10	...
Male	155,240	2,612	466	787	6,040	10,542	12,875	16,955	25,576	28,932	27,163	23,283	9	...
Female	120,444	2,153	403	599	1,995	3,249	4,919	8,188	14,172	20,848	27,182	36,735	1	...
Central American	18,332	525	96	137	959	1,461	1,776	2,075	2,633	2,950	2,813	2,906	1	...
Male	10,625	290	49	77	775	1,203	1,382	1,506	1,674	1,577	1,215	876	1	...
Female	7,707	235	47	60	184	258	394	569	959	1,373	1,598	2,030	–	...
Cuban	20,303	100	19	27	132	285	396	744	1,917	2,971	5,141	8,570	1	...
Male	10,356	55	9	12	90	212	287	504	1,313	1,849	2,657	3,367	1	...
Female	9,947	45	10	15	42	73	109	240	604	1,122	2,484	5,203	–	...
Dominican	7,178	119	18	35	176	374	428	564	867	1,360	1,531	1,706	–	...
Male	3,721	65	9	23	125	276	293	347	520	762	752	549	–	...
Female	3,457	54	9	12	51	98	135	217	347	598	779	1,157	–	...
Mexican	148,306	2,725	476	812	4,785	7,853	10,384	14,945	22,734	27,693	27,718	28,177	4	...
Male	86,166	1,476	258	473	3,602	6,063	7,561	10,098	14,834	16,291	14,115	11,392	3	...
Female	62,140	1,249	218	339	1,183	1,790	2,823	4,847	7,900	11,402	13,603	16,785	1	...
Puerto Rican	33,536	418	91	115	605	1,365	1,952	2,932	4,928	6,443	7,445	7,241	1	...
Male	18,305	230	52	64	447	1,002	1,383	1,972	3,161	3,672	3,603	2,718	1	...
Female	15,231	188	39	51	158	363	569	960	1,767	2,771	3,842	4,523	–	...
South American	13,121	144	32	51	243	427	501	804	1,500	2,213	3,221	3,985	–	...
Male	6,627	77	18	26	173	330	340	488	881	1,241	1,581	1,472	–	...
Female	6,494	67	14	25	70	97	161	316	619	972	1,640	2,513	–	...
Other and unknown Hispanic	34,908	734	137	209	1,135	2,026	2,357	3,079	5,169	6,150	6,476	7,433	3	...
Male	19,440	419	71	112	828	1,456	1,629	2,040	3,193	3,540	3,240	2,909	3	...
Female	15,468	315	66	97	307	570	728	1,039	1,976	2,610	3,236	4,524	–	...

See footnotes at end of table.

Table 3. Number of deaths and death rate by age, and age-adjusted death rate, by specified Hispanic origin and sex: United States, 2022—Con.

[Rates are per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Populations used for computing death rates for Hispanic total are postcensal estimates based on the 2010 census estimated as of July 1, 2022; populations used for computing death rates for Mexican, Puerto Rican, Cuban, Central American, South American, Dominican, and Other and unknown Hispanic are estimates based on the 2022 1-year American Community Survey adjusted to control totals. The control totals are 2010-based postcensal estimates for the United States for July 1, 2022; see Technical Notes. Hispanic origin is reported separately on the death certificate. People of Hispanic origin may be of any race. Data for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys; see Technical Notes]

| Hispanic origin and sex | All ages | Age group | | | | | | | | | | | Age not stated | Age-adjusted rate[2] |
		Younger than 1[1]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older		
							Rate[3]							
Hispanic.............................	433.0	477.4	22.2	13.1	74.4	142.1	196.3	327.7	702.5	1,522.8	3,682.6	11,107.1	...	614.7
Male.............................	481.0	514.1	23.4	14.6	109.3	209.7	270.9	432.1	905.9	1,900.2	4,368.6	12,379.5	...	748.8
Female.............................	383.7	439.4	21.0	11.6	37.8	69.4	114.0	218.4	499.9	1,193.7	3,183.0	10,427.8	...	498.4
Central American......................	280.7	479.1	21.2	12.6	86.4	135.4	167.8	272.0	525.0	1,182.2	3,017.9	9,982.8	...	517.9
Male.............................	316.4	539.5	21.3	14.0	132.9	213.5	237.8	373.1	681.5	1,493.6	3,793.3	10,109.6	...	632.0
Female.............................	242.9	420.8	21.1	11.2	34.9	50.1	82.6	158.4	374.9	953.9	2,612.0	9,929.1	...	421.8
Cuban.............................	833.6	430.8	*	10.3	49.1	81.8	118.4	221.2	574.2	1,424.0	3,827.0	12,658.8	...	587.4
Male.............................	838.0	491.9	*	*	64.6	119.3	157.9	275.2	783.7	1,854.5	4,593.3	14,416.6	...	717.2
Female.............................	829.0	374.1	*	*	32.4	42.8	71.4	156.7	363.1	1,030.0	3,247.5	11,733.0	...	478.2
Dominican.............................	299.5	291.9	*	9.3	48.3	97.4	126.7	196.4	381.7	946.5	2,454.9	9,554.7	...	427.1
Male.............................	327.5	268.0	*	12.3	68.7	144.7	181.3	275.0	540.0	1,280.9	3,252.6	10,828.4	...	547.3
Female.............................	274.3	327.0	*	*	28.0	50.7	76.6	134.7	265.2	710.2	1,985.0	9,049.7	...	346.9
Mexican.............................	396.4	496.7	20.4	12.3	70.4	136.1	197.0	337.6	753.0	1,623.5	3,865.6	12,105.9	...	649.5
Male.............................	450.8	533.7	21.6	14.0	103.7	202.4	274.0	441.4	967.2	1,973.3	4,545.0	13,203.5	...	779.8
Female.............................	339.6	459.2	19.2	10.5	35.6	64.5	112.4	226.6	531.8	1,295.4	3,346.5	11,459.3	...	531.2
Puerto Rican.............................	567.9	483.7	24.9	11.9	67.2	157.0	239.0	419.7	827.4	1,762.6	4,082.7	11,644.3	...	688.1
Male.............................	621.2	561.9	27.8	12.8	97.6	222.6	332.2	571.7	1,091.2	2,206.5	4,818.8	13,245.6	...	848.4
Female.............................	514.8	413.2	21.8	11.0	35.8	86.6	142.1	271.4	577.6	1,391.6	3,571.1	10,855.6	...	555.7
South American......................	281.1	252.1	13.6	8.4	39.0	61.5	67.7	118.1	281.6	723.0	2,312.3	7,913.0	...	344.9
Male.............................	293.2	272.6	*	8.4	54.8	96.2	92.9	150.3	346.2	960.5	2,941.1	8,496.4	...	419.1
Female.............................	269.8	232.0	*	8.3	22.8	27.6	43.1	88.8	222.6	549.6	1,917.1	7,607.1	...	290.6
Other and unknown Hispanic............	830.5	1,117.8	52.3	31.3	159.4	356.7	438.1	674.8	1,195.4	2,055.3	4,381.6	13,669.9	...	904.1
Male.............................	913.4	1,380.1	55.1	31.9	226.3	481.3	576.7	875.4	1,501.8	2,581.3	5,095.9	14,083.8	...	1,083.6
Female.............................	745.6	892.2	49.6	30.7	88.6	214.7	284.9	465.5	899.1	1,610.3	3,842.3	13,416.4	...	735.2

... Category not applicable.

– Quantity zero.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

[1]Death rates for ages younger than 1 (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

[2]For method of computation, see Technical Notes.

[3]Data for age not stated included in "All ages" but not distributed among age groups.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 4. Life expectancy at selected ages, by Hispanic origin and race and sex: United States, 2022

[Life expectancies are preliminary estimates and may change slightly when updated data become available. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards]

| | | | | | | | | | | | | Non-Hispanic[2,4] | | | | | | | | | |
| | Total[1] | | | Hispanic[2,3] | | | American Indian and Alaska Native | | | Asian | | | Black | | | White | | |
Exact age	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
0.	77.5	74.8	80.2	80.0	77.0	82.8	67.8	64.5	71.3	84.4	82.3	86.3	72.8	69.1	76.5	77.5	75.1	80.1
1.	76.9	74.3	79.6	79.4	76.4	82.2	67.4	64.2	70.8	83.7	81.6	85.6	72.6	68.9	76.3	76.9	74.4	79.4
5.	73.0	70.4	75.7	75.4	72.5	78.3	63.6	60.4	67.0	79.8	77.7	81.6	68.8	65.1	72.4	72.9	70.5	75.5
10.	68.0	65.4	70.7	70.5	67.5	73.3	58.7	55.5	62.1	74.8	72.7	76.6	63.8	60.1	67.5	68.0	65.6	70.5
15.	63.1	60.5	65.8	65.5	62.6	68.4	53.8	50.6	57.2	69.8	67.8	71.7	58.9	55.2	62.6	63.0	60.6	65.6
20.	58.3	55.7	60.9	60.7	57.8	63.5	49.2	46.1	52.6	64.9	62.9	66.7	54.3	50.7	57.7	58.2	55.8	60.7
25.	53.5	51.1	56.0	56.0	53.2	58.6	44.8	41.8	48.0	60.1	58.0	61.8	49.8	46.4	53.0	53.4	51.1	55.8
30.	48.9	46.6	51.3	51.3	48.7	53.8	40.7	38.0	43.6	55.2	53.2	56.9	45.3	42.2	48.3	48.8	46.6	51.0
35.	44.3	42.1	46.5	46.7	44.2	49.0	36.9	34.3	39.6	50.4	48.4	52.0	40.9	38.0	43.7	44.2	42.1	46.3
40.	39.8	37.7	41.9	42.1	39.8	44.2	33.4	31.0	35.8	45.6	43.7	47.1	36.6	33.8	39.3	39.7	37.7	41.7
45.	35.3	33.4	37.3	37.6	35.4	39.5	29.8	27.8	31.9	40.8	38.9	42.2	32.5	29.8	34.9	35.2	33.3	37.1
50.	30.9	29.1	32.8	33.1	31.0	34.9	26.7	24.9	28.4	36.1	34.3	37.4	28.4	25.9	30.6	30.8	29.1	32.6
55.	26.7	25.0	28.4	28.7	26.8	30.3	23.5	21.9	25.0	31.4	29.8	32.7	24.4	22.1	26.4	26.6	25.0	28.2
60.	22.7	21.1	24.2	24.5	22.7	25.9	20.6	19.3	21.8	26.9	25.4	28.0	20.8	18.6	22.6	22.6	21.1	24.0
65.	18.9	17.5	20.2	20.5	19.0	21.7	17.8	16.8	18.7	22.5	21.2	23.4	17.4	15.5	19.0	18.8	17.5	20.0
70.	15.3	14.2	16.3	16.7	15.4	17.7	14.9	14.2	15.5	18.4	17.2	19.1	14.4	12.8	15.6	15.2	14.1	16.2
75.	12.0	11.0	12.8	13.2	12.1	13.9	12.4	11.9	12.6	14.5	13.6	15.0	11.5	10.2	12.4	11.8	10.9	12.6
80.	8.9	8.1	9.5	10.0	9.1	10.4	9.9	9.6	10.0	10.8	10.1	11.1	8.9	7.8	9.5	8.8	8.0	9.4
85.	6.4	5.8	6.8	7.2	6.5	7.4	7.9	7.7	7.8	7.7	7.2	7.8	6.6	5.8	7.0	6.3	5.7	6.7
90.	4.4	3.9	4.6	5.0	4.4	5.0	6.2	6.1	6.0	5.1	4.8	5.1	4.8	4.2	5.0	4.3	3.8	4.5
95.	3.0	2.7	3.1	3.4	3.0	3.3	4.8	4.9	4.6	3.4	3.2	3.2	3.4	3.1	3.5	2.9	2.6	3.0
100.	2.1	1.9	2.2	2.4	2.2	2.3	3.9	4.0	3.6	2.3	2.2	2.1	2.5	2.3	2.5	2.0	1.8	2.1

[1]Includes origins and races not shown separately; see Technical Notes in this report.
[2]Based on death rates adjusted for Hispanic-origin and race misclassification on death certificates; see Technical Notes.
[3]Includes persons of Hispanic origin of any race; see Technical Notes.
[4]Only one race was reported on the death certificate; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 5. Life expectancy at birth, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, and 2000–2022

Hispanic origin and race and year	Both sexes	Male	Female
All origins and races[1]			
2022[2]	77.5	74.8	80.2
2021[2]	76.4	73.5	79.3
2020[2]	77.0	74.2	79.9
2019[2,3]	78.8	76.3	81.4
2018[2]	78.7	76.2	81.2
2017[2]	78.6	76.1	81.1
2016[2]	78.7	76.2	81.1
2015[2]	78.7	76.3	81.1
2014[2]	78.9	76.5	81.3
2013[2]	78.8	76.4	81.2
2012[2]	78.8	76.4	81.2
2011[2]	78.7	76.3	81.1
2010[2]	78.7	76.2	81.0
2009[2]	78.5	76.0	80.9
2008[2]	78.2	75.6	80.6
2007	78.1	75.5	80.6
2006	77.8	75.2	80.3
2005	77.6	75.0	80.1
2004	77.6	75.0	80.1
2003	77.2	74.5	79.7
2002	77.0	74.4	79.6
2001	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
Hispanic[4–6]			
2022[2]	80.0	77.0	82.8
2021[2]	77.8	74.6	81.1
2020[2]	77.9	74.6	81.3
2019[2,3]	81.9	79.1	84.4
2018[2]	81.8	79.1	84.3
2017[2]	81.8	79.1	84.3
2016[2]	81.8	79.1	84.3
2015[2,7]	81.9	79.3	84.3
2014[2]	82.1	79.4	84.5
2013[2]	81.9	79.2	84.2
2012[2]	81.9	79.3	84.3
2011[2]	81.8	79.2	84.2
2010[2]	81.7	78.8	84.3
2009[2]	81.1	78.4	83.5
2008[2]	80.8	78.0	83.3
2007	80.7	77.8	83.2
2006	80.3	77.5	82.9

See footnotes at end of table.

Table 5. Life expectancy at birth, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, and 2000–2022—Con.

Hispanic origin and race and year	Both sexes	Male	Female
Non-Hispanic, single race[6,8]			
American Indian and Alaska Native:			
2022[2]	67.8	64.5	71.3
2021[2]	65.6	62.2	69.2
2020[2]	67.1	63.8	70.7
2019[2,3]	71.8	68.6	75.0
2018[2]	---	---	---
Asian:			
2022[2]	84.4	82.3	86.3
2021[2]	83.5	81.2	85.6
2020[2]	83.6	81.1	85.9
2019[2,3]	85.6	83.5	87.4
2018[2]	---	---	---
Black:			
2022[2]	72.8	69.1	76.5
2021[2]	71.2	67.6	75.0
2020[2]	71.5	67.8	75.4
2019[2,3]	74.8	71.3	78.1
2018[2]	74.7	71.3	78.0
White:			
2022[2]	77.5	75.1	80.1
2021[2]	76.7	74.0	79.5
2020[2]	77.4	74.8	80.1
2019[2,3]	78.8	76.3	81.3
2018[2]	78.6	76.2	81.1

--- Data not available.

[1]Includes origins and races not shown separately; see Technical Notes in this report.
[2]Life expectancies for 2008–2022 were calculated using newly revised methodology described in the Technical Notes.
[3]Life expectancies were updated using final data; therefore, data may differ from preliminary data previously published; see Technical Notes.
[4]Includes persons of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 OMB standards; see Technical Notes.
[5]Data by Hispanic origin available beginning with data year 2006.
[6]Based on death rate adjusted for race and Hispanic-origin misclassification; see Technical Notes.
[7]Life expectancies were revised using updated Medicare data; as a result, data may differ from those previously published; see Technical Notes.
[8]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| Cause of death (based on ICD–10) and year | All ages[1] | Age group | | | | | | | | | | | Age-adjusted rate[3] |
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
All causes													
2022.	984.1	558.0	28.0	15.3	79.5	163.4	255.4	453.3	992.1	1,978.7	4,708.2	14,389.6	798.8
2021.	1,043.8	558.8	25.0	14.3	88.9	180.8	287.9	531.0	1,117.1	2,151.3	5,119.4	15,743.3	879.7
2020.	1,027.0	524.3	22.7	13.7	84.2	159.5	248.0	473.5	1,038.9	2,072.3	4,997.0	15,210.9	835.4
2019.	869.7	553.0	23.3	13.4	69.7	128.8	199.2	392.4	883.3	1,764.6	4,308.3	13,228.6	715.2
2018.	867.8	557.8	24.0	13.3	70.2	128.8	194.7	395.9	886.7	1,783.3	4,386.1	13,450.7	723.6
2017.	863.8	567.0	24.3	13.6	74.0	132.8	195.2	401.5	885.8	1,790.9	4,472.6	13,573.6	731.9
2016.	849.3	583.4	25.3	13.4	74.9	129.0	192.2	405.5	883.8	1,788.6	4,474.8	13,392.1	728.8
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)													
2022.	210.9	6.5	0.7	0.5	1.9	8.3	28.1	79.9	203.7	415.7	1,016.6	3,835.8	167.2
2021.	209.6	7.4	0.8	0.5	2.2	9.1	29.4	84.9	208.7	416.6	1,044.2	4,078.7	173.8
2020.	211.5	6.5	0.7	0.4	2.0	8.6	28.9	84.6	208.8	414.2	1,017.2	3,822.1	168.2
2019.	200.8	7.1	0.8	0.4	2.0	7.6	25.2	76.2	190.4	388.8	991.2	3,798.3	161.5
2018.	200.3	7.5	0.7	0.4	2.1	7.8	25.5	77.4	191.7	392.4	1,008.3	3,844.8	163.6
2017.	198.8	7.7	0.8	0.4	2.1	8.1	25.4	77.1	190.7	392.9	1,028.4	3,882.9	165.0
2016.	196.6	7.4	0.7	0.5	2.2	7.7	25.9	79.5	189.6	392.5	1,037.1	3,873.4	165.5
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	1,607.2	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

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10) and year	All ages[1]	Age group											Age-adjusted rate[3]
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Malignant neoplasms (C00–C97)													
2022	182.5	1.1	1.8	2.0	3.2	8.0	25.6	82.5	249.8	529.4	979.3	1,573.5	142.3
2021	182.4	1.5	1.8	1.9	3.1	7.9	25.8	82.5	252.4	532.1	1,017.2	1,712.9	146.6
2020	182.8	1.4	2.0	1.9	3.1	7.8	25.5	85.7	260.0	539.1	990.0	1,538.1	144.1
2019	182.7	1.5	1.8	1.9	3.3	7.8	25.7	87.1	263.3	543.3	1,005.9	1,571.0	146.2
2018	183.2	1.3	2.0	2.1	3.2	8.1	25.8	89.6	269.6	554.4	1,031.5	1,577.7	149.1
2017	183.9	1.4	2.0	2.1	3.2	8.0	26.7	92.7	273.4	567.5	1,060.2	1,600.3	152.5
2016	185.1	1.7	2.4	2.1	3.3	8.5	26.9	96.5	280.6	578.3	1,081.7	1,620.3	155.8
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
Accidents (unintentional injuries) (V01–X59,Y85–Y86)													
2022	68.1	36.8	8.7	4.0	33.1	72.7	84.6	77.6	80.8	68.5	127.8	417.4	64.0
2021	67.8	36.6	8.5	4.2	36.7	75.7	84.0	77.2	78.2	64.7	126.8	446.0	64.7
2020	61.0	32.0	7.4	3.8	35.5	68.0	73.7	68.9	68.2	57.2	113.3	383.6	57.6
2019	52.7	33.5	7.3	3.6	27.5	53.4	57.8	57.1	58.6	54.5	115.5	377.4	49.3
2018	51.1	30.4	7.7	3.5	28.0	53.9	54.9	55.4	56.0	52.3	111.3	368.6	48.0
2017	52.2	33.4	7.9	3.8	31.1	56.6	55.8	57.7	55.7	50.7	113.3	374.9	49.4
2016	49.9	30.7	7.9	4.0	31.9	53.7	51.8	54.6	52.7	49.1	110.7	365.7	47.4
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
COVID-19 (U07.1)[4]													
2022	56.0	3.8	0.7	0.3	1.0	3.6	8.8	23.9	57.6	124.5	292.2	818.2	44.5
2021	125.6	2.6	0.4	0.3	3.3	13.5	36.9	90.6	172.2	305.1	609.7	1,354.4	104.1
2020	106.5	0.9	*	0.1	1.2	4.9	14.4	42.0	99.3	234.3	589.8	1,645.0	85.0

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10) and year	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age-adjusted rate[3]
Cerebrovascular diseases (I60–I69)													
2022.	49.6	2.4	0.3	0.2	0.4	1.3	4.9	13.8	33.7	84.0	265.0	1,043.9	39.5
2021.	49.1	2.7	0.4	0.2	0.4	1.4	5.0	14.1	34.2	84.1	274.8	1,111.1	41.1
2020.	48.6	2.8	0.4	0.2	0.4	1.3	4.8	14.1	33.4	81.0	262.9	1,017.9	38.8
2019.	45.7	2.7	0.3	0.2	0.4	1.3	4.2	12.6	30.5	76.4	254.2	977.3	37.0
2018.	45.2	2.5	0.3	0.2	0.3	1.2	4.1	12.3	30.3	76.8	256.0	984.3	37.1
2017.	44.9	2.5	0.4	0.2	0.4	1.3	4.4	12.3	30.3	76.4	263.1	993.5	37.6
2016.	44.0	3.1	0.3	0.2	0.3	1.3	4.6	12.5	29.7	76.0	265.5	972.9	37.3
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
Chronic lower respiratory diseases (J40–J47)													
2022.	44.2	*	0.3	0.3	0.4	0.8	1.7	7.4	40.7	114.6	283.9	575.8	34.3
2021.	42.9	*	0.2	0.2	0.4	0.8	1.7	7.8	41.2	112.7	285.9	600.6	34.7
2020.	46.3	*	*	0.4	0.5	0.9	1.9	8.8	44.4	118.5	300.1	612.6	36.4
2019.	47.8	*	0.2	0.4	0.4	0.8	1.6	8.8	44.2	124.6	318.0	654.3	38.2
2018.	48.7	*	0.3	0.3	0.4	0.7	1.6	9.1	44.5	128.6	335.7	682.4	39.7
2017.	49.2	*	0.2	0.3	0.4	0.7	1.7	9.4	44.4	133.8	347.6	700.6	40.9
2016.	47.8	0.7	0.3	0.3	0.5	0.8	1.7	10.1	43.0	134.1	347.2	676.9	40.6
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

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

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Cause of death (based on ICD–10) and year	All ages[1]	Age group										85 and older	Age-adjusted rate[3]
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84		
Alzheimer disease (G30)													
2022	36.0	*	*	*	*	*	*	0.3	3.5	26.7	206.2	1,131.5	28.9
2021	36.0	*	*	*	*	*	*	0.3	3.2	26.4	214.3	1,243.6	31.0
2020	40.7	*	*	*	*	*	*	0.2	3.3	28.6	229.3	1,287.3	32.4
2019	37.0	*	*	*	*	*	*	0.3	3.0	24.9	210.2	1,191.3	29.8
2018	37.3	*	*	*	*	*	*	0.3	2.9	24.7	213.9	1,225.3	30.5
2017	37.3	*	*	*	*	*	*	0.2	2.8	24.5	219.7	1,244.7	31.0
2016	35.9	*	*	*	*	*	*	0.2	2.7	23.6	214.1	1,216.9	30.3
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)													
2022	30.4	*	*	0.1	0.7	2.6	6.6	18.2	41.4	79.8	150.6	287.3	24.1
2021	31.1	*	*	0.1	0.8	2.8	6.8	18.7	43.5	83.0	160.4	309.9	25.4
2020	31.0	*	*	0.1	0.7	2.5	6.9	18.7	42.5	83.6	154.7	293.4	24.8
2019	26.7	*	*	0.1	0.6	1.9	5.3	15.5	36.5	73.3	138.9	259.5	21.6
2018	26.0	*	*	0.1	0.6	1.8	5.5	15.4	35.3	72.1	137.5	260.4	21.4
2017	25.7	*	*	0.1	0.6	1.8	5.2	15.1	35.5	71.9	140.8	262.4	21.5
2016	24.8	*	*	0.1	0.5	1.8	5.1	14.6	34.4	69.9	137.9	263.6	21.0
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

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| Cause of death (based on ICD–10) and year | All ages[1] | Age group | | | | | | | | | | | Age-adjusted rate[3] |
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Nephritis, nephrotic syndrome and nephrosis (N00–N07, N17–N19,N25–N27)													
2022.	17.4	1.0	*	*	0.1	0.8	2.4	6.6	15.8	38.3	97.0	264.2	13.8
2021.	16.4	1.3	*	*	0.1	0.8	2.2	6.2	14.9	36.4	96.1	271.1	13.6
2020.	15.9	1.2	*	*	0.2	0.7	2.0	5.8	14.7	35.2	89.3	248.1	12.7
2019.	15.7	1.6	*	*	0.2	0.7	1.8	5.6	13.8	34.7	92.2	250.9	12.7
2018.	15.7	2.0	*	*	0.1	0.6	1.8	5.4	13.6	35.6	94.3	257.9	12.9
2017.	15.5	2.0	*	*	0.1	0.6	1.7	5.2	13.5	34.7	95.8	267.1	13.0
2016.	15.5	1.6	*	*	0.1	0.6	1.8	5.0	13.6	34.6	98.1	270.1	13.1
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
Chronic liver disease and cirrhosis (K70,K73–K74)													
2022.	16.4	*	*	*	0.1	3.9	12.6	23.3	39.2	39.0	36.7	30.2	13.8
2021.	17.0	*	*	*	0.1	4.0	13.4	25.8	41.3	38.4	36.4	31.0	14.5
2020.	15.7	*	*	*	0.1	3.5	11.7	23.5	38.1	36.5	34.5	27.0	13.3
2019.	13.5	*	*	*	0.1	2.4	8.2	19.8	33.9	33.1	33.2	26.5	11.3
2018.	13.1	*	*	*	0.1	2.2	7.5	19.6	33.0	32.5	32.5	25.5	11.1
2017.	12.8	*	*	*	0.1	2.0	7.3	19.6	32.7	31.7	31.3	26.8	10.9
2016.	12.5	*	*	*	0.1	2.1	7.0	19.5	32.4	30.7	31.9	24.5	10.7
2015.	12.5	*	*	*	0.1	1.9	7.0	20.5	32.5	30.5	31.9	25.1	10.8
2014.	12.0	*	*	*	0.1	1.7	6.4	19.9	31.9	29.6	30.4	23.4	10.4
2013.	11.5	*	*	*	0.1	1.6	6.2	20.1	30.4	28.1	29.9	23.0	10.2
2012.	11.1	*	*	*	0.1	1.4	6.1	20.1	29.1	27.6	29.3	21.4	9.9
2011.	10.8	*	*	*	0.1	1.2	6.0	19.8	28.2	26.3	29.3	22.1	9.7
2010.	10.3	*	*	*	0.1	1.2	5.9	19.2	26.8	26.3	27.7	21.8	9.4
2009.	10.0	*	*	*	0.1	1.1	6.0	18.7	25.9	25.4	27.2	21.1	9.1
2008.	9.9	*	*	*	0.1	1.1	6.1	18.5	25.0	26.3	28.0	21.9	9.2
2007.	9.7	*	*	*	0.1	1.0	6.0	18.7	24.2	26.2	28.2	21.7	9.1
2006.	9.2	*	*	*	0.1	0.8	5.9	17.8	22.6	25.6	28.9	21.1	8.8
2005.	9.3	*	*	*	0.1	0.8	6.2	17.7	23.3	26.8	28.9	21.3	8.9
2004.	9.2	*	*	*	*	0.8	6.4	18.0	22.4	27.4	28.7	21.1	9.0
2003.	9.5	*	*	*	*	0.9	6.8	18.3	22.9	29.2	29.9	21.2	9.3
2002.	9.5	*	*	*	0.1	1.0	7.1	18.0	22.8	29.3	31.3	22.5	9.4
2001.	9.5	*	*	*	0.1	1.0	7.4	18.4	22.9	29.8	30.2	22.7	9.5
2000.	9.4	*	*	*	0.1	1.0	7.5	17.7	23.8	29.8	31.0	23.1	9.5
1999.	9.4	*	*	*	0.1	1.0	7.3	17.4	23.7	30.6	31.9	23.2	9.6

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| Cause of death (based on ICD–10) and year | All ages[1] | Age group | | | | | | | | | | | Age-adjusted rate[3] |
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)													
2022	14.8	…	…	1.2	13.6	19.0	18.7	19.2	18.7	16.0	20.3	23.0	14.2
2021	14.5	…	…	1.5	15.2	19.5	18.1	18.2	17.0	15.3	19.6	22.4	14.1
2020	14.0	…	…	1.5	14.2	18.4	17.4	18.0	16.9	14.5	18.4	20.9	13.5
2019	14.5	…	…	1.3	13.9	17.5	18.1	19.6	19.4	15.5	18.6	20.1	13.9
2018	14.8	…	…	1.5	14.5	17.6	18.2	20.0	20.2	16.3	18.7	19.1	14.2
2017	14.5	…	…	1.3	14.5	17.5	17.9	20.2	19.0	15.6	18.0	20.1	14.0
2016	13.9	…	…	1.1	13.2	16.5	17.4	19.7	18.7	15.4	18.2	19.0	13.5
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	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
Influenza and pneumonia (J09–J18)													
2022	14.1	4.2	0.9	0.3	0.4	1.1	2.3	4.7	12.0	27.8	72.9	244.2	11.3
2021	12.6	3.5	0.3	0.1	0.3	0.9	1.9	4.4	11.3	25.3	69.9	231.8	10.5
2020	16.3	3.3	0.5	0.3	0.4	1.3	2.7	6.2	14.8	32.1	84.1	273.6	13.0
2019	15.2	4.1	0.8	0.3	0.4	1.0	2.3	5.1	12.5	27.3	77.2	294.7	12.3
2018	18.1	4.6	0.8	0.3	0.5	1.0	2.3	5.6	13.9	31.7	94.2	377.6	14.9
2017	17.1	4.0	0.7	0.3	0.4	0.9	1.9	4.8	12.0	29.6	93.8	375.3	14.3
2016	15.9	4.2	0.6	0.2	0.4	1.0	2.2	5.0	12.1	28.5	88.5	340.3	13.5
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

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| Cause of death (based on ICD–10) and year | All ages[1] | Age group | | | | | | | | | | | Age-adjusted rate[3] |
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Essential hypertension and hypertensive renal disease (I10,I12,I15)													
2022	13.0	*	*	*	0.1	0.4	1.6	4.5	11.8	24.6	61.6	254.0	10.3
2021	12.9	*	*	*	0.1	0.4	1.5	4.8	12.1	24.9	63.2	270.8	10.7
2020	12.7	*	*	*	0.1	0.3	1.4	4.5	11.8	23.9	60.3	250.3	10.1
2019	11.1	*	*	*	*	0.3	1.2	3.6	9.8	20.9	54.3	227.1	8.9
2018	11.0	*	*	*	*	0.3	1.2	3.7	9.7	20.2	54.4	229.4	8.9
2017	10.8	*	*	*	*	0.3	1.3	3.9	9.5	19.7	55.8	231.4	9.0
2016	10.3	*	*	*	*	0.3	1.1	3.8	9.0	19.0	53.7	222.3	8.6
2015	10.0	*	*	*	*	0.3	1.2	3.4	8.8	18.1	54.1	222.7	8.5
2014	9.5	*	*	*	0.0	0.2	1.1	3.3	8.4	16.9	51.3	217.0	8.2
2013	9.7	*	*	*	0.1	0.3	1.0	3.5	8.0	17.3	53.7	231.6	8.5
2012	9.3	*	*	*	*	0.2	0.8	3.0	7.8	16.1	51.7	230.7	8.2
2011	8.9	*	*	*	*	0.2	1.0	3.1	7.0	16.6	51.4	222.7	8.1
2010	8.6	*	*	*	0.0	0.3	1.0	3.1	7.3	16.7	51.8	212.0	8.0
2009	8.4	*	*	*	0.1	0.3	1.0	3.1	7.1	16.3	51.0	208.0	7.8
2008	8.5	*	*	*	0.1	0.3	1.0	3.0	7.2	16.5	51.9	215.3	8.0
2007	8.0	*	*	*	0.1	0.2	0.9	2.8	6.4	15.9	49.2	209.1	7.6
2006	8.0	*	*	*	0.0	0.3	0.9	3.0	6.8	16.5	50.8	206.1	7.7
2005	8.4	*	*	*	0.1	0.2	0.9	2.7	6.4	17.5	55.5	228.0	8.3
2004	7.9	*	*	*	0.1	0.3	0.8	2.7	6.3	16.9	52.5	212.2	7.9
2003	7.6	*	*	*	0.1	0.2	0.8	2.5	6.3	16.8	51.6	199.4	7.6
2002	7.0	*	*	*	0.1	0.2	0.8	2.3	5.7	15.9	48.1	189.6	7.1
2001	6.8	*	*	*	0.1	0.3	0.7	2.4	5.8	15.4	47.6	175.6	6.9
2000	6.4	*	*	*	*	0.2	0.8	2.3	5.9	15.1	45.5	162.9	6.5
1999	6.1	*	*	*	*	0.2	0.7	2.2	5.5	15.2	43.6	152.1	6.2
Septicemia (A40–A41)													
2022	12.7	3.3	0.4	0.1	0.3	1.0	2.3	6.2	14.7	31.4	66.9	145.4	10.1
2021	12.4	3.2	0.2	0.1	0.2	0.9	2.6	6.0	15.1	31.1	67.4	153.3	10.2
2020	12.2	3.1	0.3	0.1	0.2	0.8	2.3	6.2	14.7	29.7	63.5	143.1	9.7
2019	11.7	3.5	0.3	0.2	0.3	0.8	1.9	5.3	13.4	28.0	64.5	150.2	9.5
2018	12.4	3.9	0.3	0.1	0.2	0.9	2.0	5.7	14.1	30.0	69.4	167.4	10.2
2017	12.6	3.7	0.3	0.1	0.3	0.9	2.1	5.8	13.9	30.9	72.4	173.3	10.6
2016	12.6	4.8	0.4	0.2	0.3	0.9	2.2	5.8	14.3	30.6	73.9	174.2	10.7
2015	12.7	4.5	0.3	0.2	0.3	0.9	2.0	5.9	14.1	31.4	75.3	185.8	11.0
2014	12.2	4.0	0.3	0.2	0.3	0.8	2.1	5.8	14.2	31.1	73.1	176.9	10.7
2013	12.1	3.9	0.3	0.1	0.3	0.8	2.0	5.6	13.6	30.5	76.4	179.6	10.7
2012	11.4	4.5	0.4	0.1	0.3	0.8	1.9	5.3	12.9	29.2	73.9	173.4	10.3
2011	11.5	4.5	0.4	0.2	0.3	0.8	2.0	5.5	13.0	29.5	74.4	179.7	10.5
2010	11.3	5.5	0.4	0.2	0.3	0.8	1.9	5.2	12.6	30.1	76.0	179.0	10.6
2009	11.6	5.5	0.4	0.2	0.3	0.9	2.2	5.4	13.1	31.4	79.2	182.4	11.0
2008	11.8	7.0	0.6	0.2	0.3	0.9	2.1	5.7	13.3	31.4	82.0	189.8	11.3
2007	11.6	6.8	0.5	0.2	0.4	0.7	2.1	5.5	12.8	32.2	79.5	190.8	11.2
2006	11.5	6.7	0.6	0.2	0.3	0.7	2.0	5.2	12.6	31.6	82.1	193.0	11.2
2005	11.6	7.5	0.5	0.2	0.3	0.8	1.9	5.2	12.8	32.2	81.3	203.4	11.4
2004	11.4	6.8	0.5	0.2	0.3	0.8	1.9	5.4	12.8	32.1	81.5	199.6	11.3
2003	11.7	7.0	0.5	0.2	0.4	0.8	2.1	5.3	13.0	32.3	84.8	213.7	11.8
2002	11.8	7.5	0.5	0.2	0.3	0.8	1.9	5.2	12.6	34.5	86.3	213.4	11.9
2001	11.3	7.8	0.7	0.2	0.3	0.7	1.8	5.0	12.4	32.6	82.2	210.3	11.5
2000	11.1	7.2	0.6	0.2	0.3	0.7	1.9	4.9	11.9	31.0	80.4	215.7	11.3
1999	11.0	7.5	0.6	0.2	0.3	0.7	1.8	4.6	11.4	31.2	79.4	220.7	11.3

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10) and year	All ages[1]	Age group											Age-adjusted rate[3]
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Parkinson disease (G20–G21)													
2022.	12.0	*	*	*	*	*	*	0.2	2.1	19.0	102.1	225.4	9.5
2021.	11.6	*	*	*	*	*	*	0.2	2.0	18.6	102.5	246.0	9.8
2020.	12.2	*	*	*	*	*	*	0.2	2.1	19.0	105.3	237.4	9.9
2019.	10.8	*	*	*	*	*	*	0.2	1.9	16.8	93.3	215.9	8.8
2018.	10.3	*	*	*	*	*	*	0.2	1.8	16.2	91.0	214.6	8.7
2017.	9.8	*	*	*	*	*	*	0.1	1.7	15.7	89.6	206.3	8.4
2016.	9.2	*	*	*	*	*	*	0.2	1.6	14.3	85.5	198.6	8.0
2015.	8.7	*	*	*	*	*	*	0.2	1.5	13.8	82.4	190.6	7.7
2014.	8.2	*	*	*	*	*	*	0.2	1.4	13.0	79.2	182.0	7.4
2013.	8.0	*	*	*	*	*	*	0.2	1.5	12.7	78.5	178.2	7.3
2012.	7.6	*	*	*	*	*	*	0.1	1.4	12.3	76.2	172.3	7.0
2011.	7.4	*	*	*	*	*	*	0.1	1.3	12.8	76.0	168.1	7.0
2010.	7.1	*	*	*	*	*	*	0.2	1.3	11.8	74.8	165.9	6.8
2009.	6.7	*	*	*	*	*	*	0.2	1.3	11.2	70.8	157.0	6.5
2008.	6.7	*	*	*	*	*	*	0.2	1.2	12.3	71.2	157.4	6.6
2007.	6.7	*	*	*	*	*	*	0.1	1.2	11.7	71.5	157.0	6.5
2006.	6.6	*	*	*	*	*	*	0.2	1.2	12.0	69.5	157.6	6.5
2005.	6.6	*	*	*	*	*	*	0.2	1.4	12.8	71.1	156.0	6.6
2004.	6.1	*	*	*	*	*	*	0.2	1.2	11.9	67.4	145.1	6.2
2003.	6.2	*	*	*	*	*	*	0.2	1.3	12.6	67.6	145.8	6.3
2002.	5.9	*	*	*	*	*	*	0.1	1.2	12.1	63.8	142.2	6.0
2001.	5.8	*	*	*	*	*	*	0.1	1.2	11.7	64.5	137.0	5.9
2000.	5.6	*	*	*	*	*	*	0.1	1.1	11.5	61.9	131.9	5.7
1999.	5.2	*	*	*	*	*	*	0.1	1.0	11.0	58.2	124.4	5.4
Dementia-related causes[6]													
2022.	87.9	*	*	0.1	*	*	0.1	0.9	9.4	67.4	476.2	2,809.6	70.4
2021.	84.3	*	*	0.1	*	0.0	0.2	0.9	8.6	65.0	477.6	2,949.3	72.4
2020.	92.3	*	*	*	*	0.0	0.1	0.8	8.7	68.1	495.1	2,946.9	73.3
2019.	82.8	*	*	0.1	*	0.1	0.1	0.9	8.2	59.3	448.6	2,688.9	66.6
2018.	81.6	*	*	*	*	0.1	0.1	0.8	7.8	57.9	447.0	2,700.3	66.6
2017.	80.4	*	*	0.0	*	*	0.1	0.7	7.5	56.9	450.9	2,707.3	66.7
2016.	77.2	*	*	0.1	*	0.1	0.1	0.8	7.3	54.7	441.6	2,626.4	64.9
2015.	76.5	*	*	0.1	*	*	0.1	0.8	6.8	53.0	447.2	2,637.4	65.2
2014.	75.2	*	0.1	0.1	*	*	0.1	0.8	6.9	52.7	450.6	2,611.3	64.9
2013.	74.1	*	*	*	*	*	0.1	0.9	7.4	52.2	449.7	2,601.8	64.8
2012.	71.2	*	0.2	*	*	*	0.1	0.9	6.8	50.3	445.2	2,532.7	63.3
2011.	68.3	*	0.1	0.1	*	*	0.1	0.8	6.5	50.4	436.6	2,458.6	61.8
2010.	63.6	*	*	*	*	*	0.1	0.9	6.3	48.3	412.1	2,352.4	58.8
2009.	57.9	*	0.1	0.1	*	0.1	0.2	0.8	5.7	45.2	383.3	2,151.3	54.2
2008.	58.9	*	0.2	0.1	*	*	0.1	0.9	6.0	46.4	396.7	2,213.2	55.9
2007.	51.8	*	0.2	0.1	*	*	0.1	0.8	5.5	42.3	350.0	1,976.0	49.8
2006.	50.8	*	0.1	0.1	*	*	0.1	0.8	5.5	42.4	346.2	1,967.0	49.5
2005.	43.8	*	0.2	*	*	*	0.1	0.6	4.5	36.3	302.1	1,735.4	43.4
2004.	39.0	*	0.2	0.1	*	*	0.1	0.6	3.9	33.1	275.4	1,556.9	39.1
2003.	38.1	*	0.2	0.1	*	*	0.1	0.6	4.0	34.1	269.5	1,523.1	38.4
2002.	35.5	*	0.2	0.1	*	*	0.1	0.4	3.6	31.9	254.9	1,428.9	36.1
2001.	32.5	*	0.2	0.0	*	0.1	0.1	0.5	3.8	30.5	234.6	1,299.3	33.1
2000.	29.7	*	0.2	0.1	0.1	0.1	0.1	0.5	3.6	29.4	218.5	1,180.9	30.5
1999.	26.7	*	0.2	0.1	*	*	0.1	0.4	3.4	27.0	197.9	1,062.5	27.5

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10) and year	All ages[1]	Age group											Age-adjusted rate[3]
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Drug-induced causes[6]													
2022.	33.6	2.0	1.2	0.4	15.3	51.8	65.1	57.3	50.7	20.7	6.3	4.7	33.8
2021.	33.5	2.1	0.8	0.3	17.5	54.2	64.0	56.2	48.0	18.5	6.0	5.3	33.6
2020.	29.2	1.7	0.4	0.3	17.0	48.8	55.8	49.1	39.9	14.7	4.9	5.1	29.5
2019.	22.7	1.3	0.3	0.2	11.5	36.9	42.3	38.9	32.7	12.6	5.2	4.6	22.8
2018.	21.7	0.8	0.2	0.1	11.0	36.8	40.0	37.3	30.4	11.4	4.8	5.1	21.8
2017.	22.7	0.9	0.2	0.2	13.0	39.8	40.6	39.8	30.0	10.5	4.5	5.3	22.8
2016.	20.8	0.9	0.3	0.1	12.8	35.9	36.6	36.5	27.7	9.2	4.1	5.3	20.8
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
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]													
2022.	15.4	*	*	*	0.5	6.6	17.0	26.8	39.7	28.8	15.7	7.6	13.5
2021.	16.3	*	*	*	0.5	6.7	18.0	30.3	42.0	29.6	15.4	7.8	14.4
2020.	14.9	*	*	*	0.4	6.0	16.0	27.5	39.3	27.1	14.4	6.5	13.1
2019.	11.9	*	*	*	0.4	4.2	11.1	22.0	32.5	22.5	12.6	6.4	10.4
2018.	11.4	*	*	*	0.3	3.7	10.0	21.6	31.5	22.2	12.4	6.1	9.9
2017.	11.0	*	*	*	0.3	3.4	9.4	21.8	30.2	20.9	11.7	6.4	9.6
2016.	10.8	*	*	*	0.4	3.6	9.2	21.4	29.7	20.3	11.8	6.3	9.5
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

See footnotes at end of table.

Table 6. Death rate by age, and age-adjusted death rate, for the 15 leading causes of death in 2022, dementia-related causes, drug-induced causes, alcohol-induced causes, and injury by firearms: United States, 1999–2022—Con.

[Rates are 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 in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| Cause of death (based on ICD–10) and year | All ages[1] | Age group | | | | | | | | | | | Age-adjusted rate[3] |
		Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
Injury by firearms[6]													
2022...................	14.5	*	0.9	1.5	21.1	22.9	18.1	14.8	13.4	11.9	16.5	18.5	14.2
2021...................	14.7	*	0.9	1.6	23.5	24.8	18.1	14.5	12.1	11.7	16.2	18.3	14.6
2020...................	13.7	*	0.8	1.5	22.2	22.7	16.7	13.3	11.8	10.9	15.3	16.2	13.6
2019...................	12.1	*	0.5	1.0	17.4	18.1	14.6	12.7	12.3	11.1	15.0	16.1	11.9
2018...................	12.1	*	0.6	1.1	17.2	17.7	14.6	12.8	12.7	12.0	15.4	14.7	11.9
2017...................	12.2	*	0.5	1.1	17.7	18.5	14.4	13.1	12.3	11.4	14.8	15.6	12.0
2016...................	12.0	*	0.6	0.9	17.2	18.2	14.5	12.8	11.9	11.4	14.7	14.3	11.8
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

* Estimate does not meet National Center for Health Statistics standards of reliability; 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 ages younger than 1 year (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.
[3]For computation method, see Technical Notes.
[4]COVID-19 became an official cause of death in 2020; rates for years before 2020 are not applicable.
[5]Data include September 11, 2001, related deaths for which death certificates were filed as of October 24, 2002; see Technical Notes from "Deaths: Final Data for 2001," National Vital Statistics Reports, vol 53, no 3.
[6]For the list of ICD–10 codes included, see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 7. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022

[An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| Cause of death (based on ICD–10) | All ages | Age group | | | | | | | | | | | Age not stated |
		Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	
All causes	3,279,857	20,553	4,156	6,239	35,232	74,369	111,605	183,284	417,541	668,581	824,903	933,291	103
Salmonella infections (A01–A02)	82	5	3	–	2	2	2	6	11	16	25	10	–
Shigellosis and amebiasis (A03,A06)	17	–	3	1	–	–	–	3	2	6	1	1	–
Certain other intestinal infections (A04,A07–A09)	7,380	141	20	15	16	33	85	253	758	1,646	2,256	2,157	–
Tuberculosis (A16–A19)	565	–	–	2	5	21	25	41	128	138	123	82	–
Respiratory tuberculosis (A16)	391	–	–	1	5	11	21	24	85	93	85	66	–
Other tuberculosis (A17–A19)	174	–	–	1	–	10	4	17	43	45	38	16	–
Whooping cough (A37)	2	1	–	–	–	–	–	1	–	–	–	–	–
Scarlet fever and erysipelas (A38,A46)	3	–	–	–	–	–	1	–	–	1	1	–	–
Meningococcal infection (A39)	27	1	1	1	4	2	8	5	3	1	1	–	–
Septicemia (A40–A41)	42,261	123	60	59	113	447	1,024	2,488	6,167	10,623	11,723	9,433	1
Syphilis (A50–A53)	61	15	1	–	–	–	4	7	5	12	10	7	–
Acute poliomyelitis (A80)	–	–	–	–	–	–	–	–	–	–	–	–	–
Arthropod-borne viral encephalitis (A83–A84,A85.2)	6	–	–	–	–	–	–	–	2	3	1	–	–
Measles (B05)	–	–	–	–	–	–	–	–	–	–	–	–	–
Viral hepatitis (B15–B19)	3,107	2	4	–	2	25	129	356	1,057	1,116	306	110	–
Human immunodeficiency virus (HIV) disease (B20–B24)	4,941	1	–	–	43	481	777	1,002	1,407	902	271	57	–
Malaria (B50–B54)	8	–	–	–	1	–	1	1	4	–	1	–	–
Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05,A20–A36,A42–A44,A48–A49, A54–A79,A81–A82,A85.0–A85.1,A85.8,A86–B04, B06–B09,B25–B49,B55–B99,U07.1)	198,029	287	238	225	524	1,821	4,207	10,426	26,038	44,837	54,181	55,244	1
Malignant neoplasms (C00–C97)	608,371	40	266	835	1,421	3,641	11,177	33,363	105,133	178,860	171,573	102,057	5
Malignant neoplasms of lip, oral cavity and pharynx (C00–C14)	11,884	–	–	1	6	65	205	866	2,903	3,662	2,731	1,445	–
Malignant neoplasm of esophagus (C15)	16,016	–	–	1	6	33	226	1,040	3,456	5,524	4,099	1,629	2
Malignant neoplasm of stomach (C16)	10,853	–	1	–	17	124	457	943	2,078	2,926	2,669	1,637	1
Malignant neoplasms of colon, rectum and anus (C18–C21)	54,268	–	–	1	35	349	1,647	5,072	10,491	13,981	12,751	9,941	–
Malignant neoplasms of liver and intrahepatic bile ducts (C22)	28,937	4	9	16	26	122	373	1,354	6,098	10,692	7,237	3,006	–
Malignant neoplasm of pancreas (C25)	48,323	1	–	2	4	70	490	2,403	8,783	15,445	14,239	6,886	–
Malignant neoplasm of larynx (C32)	3,933	–	–	–	1	2	25	202	965	1,423	931	384	–
Malignant neoplasms of trachea, bronchus and lung (C33–C34)	131,982	–	–	1	12	118	771	4,484	24,394	44,583	40,755	16,863	1
Malignant melanoma of skin (C43)	8,243	–	1	–	15	106	293	566	1,362	2,248	2,161	1,491	–
Malignant neoplasm of breast (C50)	42,672	–	–	–	7	383	1,856	4,083	8,165	10,747	9,864	7,567	–
Malignant neoplasm of cervix uteri (C53)	4,051	–	–	–	4	152	562	791	932	835	507	268	–
Malignant neoplasms of corpus uteri and uterus, part unspecified (C54–C55)	12,764	–	–	–	–	46	211	723	2,568	4,541	3,257	1,417	1
Malignant neoplasm of ovary (C56)	13,214	–	–	2	33	104	287	1,061	2,717	3,835	3,549	1,626	–
Malignant neoplasm of prostate (C61)	33,363	–	–	–	2	2	21	357	2,777	8,385	11,604	10,215	–
Malignant neoplasms of kidney and renal pelvis (C64–C65)	14,488	2	12	29	22	57	198	919	2,633	4,214	4,012	2,390	–
Malignant neoplasm of bladder (C67)	17,334	–	–	1	1	20	100	330	1,640	3,910	5,870	5,462	–
Malignant neoplasms of meninges, brain and other parts of central nervous system (C70–C72)	17,937	9	56	302	243	446	823	1,692	3,881	5,365	3,708	1,412	–
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	56,959	14	98	206	383	594	996	2,180	6,551	14,392	18,901	12,644	–

See footnotes at end of table.

Table 7. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	All ages	Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated
Hodgkin disease . . . . (C81)	1,056	–	–	2	12	48	59	102	140	259	273	161	–
Non-Hodgkin lymphoma. . . . . (C82–C85)	19,794	–	3	20	55	150	320	776	2,335	5,058	6,670	4,407	–
Leukemia . . . . (C91–C95)	23,324	14	95	184	313	384	526	873	2,437	5,620	7,561	5,317	–
Multiple myeloma and immunoproliferative neoplasms . . . . (C88,C90)	12,616	–	–	–	1	10	87	425	1,617	3,420	4,340	2,716	–
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C96)	169	–	–	–	2	2	4	4	22	35	57	43	–
All other and unspecified malignant neoplasms . . . . (C17,C23–C24, C26–C31,C37–C41,C44–C49,C51–C52,C57–C60, C62–C63,C66,C68–C69,C73–C80,C97)	81,150	10	89	273	604	848	1,636	4,297	12,739	22,152	22,728	15,774	–
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior . . . . (D00–D48)	16,034	32	37	51	74	106	256	503	1,437	3,376	5,216	4,946	–
Anemias. . . . . (D50–D64)	6,021	5	13	31	88	153	218	289	612	1,110	1,512	1,990	–
Diabetes mellitus . . . . (E10–E14)	101,209	2	7	48	324	1,188	2,879	7,364	17,410	26,963	26,388	18,634	2
Nutritional deficiencies. (E40–E64)	21,020	13	10	4	13	47	113	282	1,010	2,728	5,458	11,342	–
Malnutrition . . . . (E40–E46)	20,552	8	9	4	13	46	104	258	945	2,632	5,366	11,167	–
Other nutritional deficiencies . . . . (E50–E64)	468	5	1	–	–	1	9	24	65	96	92	175	–
Meningitis . . . . (G00,G03)	604	43	18	17	15	29	59	61	93	130	96	43	–
Parkinson disease . . . . (G20–G21)	39,915	1	–	–	–	6	12	86	879	6,424	17,886	14,621	–
Alzheimer disease . . . . (G30)	120,122	–	–	–	–	–	6	111	1,480	9,005	36,133	73,387	–
Major cardiovascular diseases. . . . . (I00–I78)	936,436	340	156	335	1,078	4,765	15,656	40,956	107,984	182,806	242,054	340,276	30
Diseases of heart . . . . (I00–I09,I11,I13,I20–I51)	702,880	241	103	218	848	3,789	12,258	32,298	85,733	140,475	178,108	248,782	27
Acute rheumatic fever and chronic rheumatic heart diseases . . . . (I00–I09)	4,294	1	1	1	10	61	127	196	457	818	1,215	1,407	–
Hypertensive heart disease . . . . (I11)	72,070	–	–	2	58	539	2,146	4,701	10,137	13,199	14,820	26,465	3
Hypertensive heart and renal disease . . . . (I13)	16,091	–	–	1	2	45	158	456	1,050	2,279	4,288	7,812	–
Ischemic heart diseases . . . . (I20–I25)	371,506	11	5	8	102	990	4,956	17,223	50,365	83,121	97,826	116,879	20
Acute myocardial infarction. . . . . (I21–I22)	103,905	4	1	3	47	394	1,877	6,109	16,744	25,801	27,512	25,409	4
Other acute ischemic heart diseases . . . . (I24)	4,823	2	1	1	3	21	83	308	823	1,146	1,182	1,253	–
Other forms of chronic ischemic heart disease . . . . (I20,I25)	262,778	5	3	4	52	575	2,996	10,806	32,798	56,174	69,132	90,217	16
Atherosclerotic cardiovascular disease, so described . . . . (I25.0)	81,672	–	1	1	21	351	1,767	6,079	16,731	22,134	17,820	16,755	12
All other forms of chronic ischemic heart disease. . . . . (I20,I25.1–I25.9)	181,106	5	2	3	31	224	1,229	4,727	16,067	34,040	51,312	73,462	4
Other heart diseases . . . . (I26–I51)	238,919	229	97	206	676	2,154	4,871	9,722	23,724	41,058	59,959	96,219	4
Acute and subacute endocarditis. (I33)	1,803	2	–	3	17	109	177	213	323	403	359	197	–
Diseases of pericardium and acute myocarditis . . . . . . (I30–I31,I40)	1,237	9	3	18	22	43	65	101	182	292	283	219	–
Heart failure. . . . . (I50)	87,941	13	5	8	43	247	714	1,962	5,820	12,599	22,750	43,779	1
All other forms of heart disease. (I26–I28, I34–I38,I42–I49,I51)	147,938	205	89	177	594	1,755	3,915	7,446	17,399	27,764	36,567	52,024	3
Essential hypertension and hypertensive renal disease . . . . (I10,I12,I15)	43,293	3	–	2	24	175	697	1,832	4,982	8,315	10,790	16,472	1
Cerebrovascular diseases. . . . . (I60–I69)	165,393	87	49	100	157	599	2,150	5,563	14,173	28,384	46,421	67,708	2
Atherosclerosis. . . . . (I70)	3,936	2	1	–	–	2	10	68	291	684	999	1,879	–
Other diseases of circulatory system . . . . (I71–I78)	20,934	7	3	15	49	200	541	1,195	2,805	4,948	5,736	5,435	–

See footnotes at end of table.

Table 7. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	All ages	Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated
Aortic aneurysm and dissection . . . . (I71)	9,999	1	–	7	29	128	357	747	1,435	2,225	2,762	2,308	–
Other diseases of arteries, arterioles and capillaries . . . . (I72–I78)	10,935	6	3	8	20	72	184	448	1,370	2,723	2,974	3,127	–
Other disorders of circulatory system . . . . (I80–I99)	5,216	16	1	3	60	191	480	613	926	1,028	1,009	888	1
Influenza and pneumonia . . . . (J09–J18)	47,052	154	129	131	168	490	985	1,905	5,067	9,408	12,774	15,840	1
Influenza . . . . (J09–J11)	5,944	12	53	76	61	112	217	310	771	1,147	1,475	1,710	–
Pneumonia . . . . (J12–J18)	41,108	142	76	55	107	378	768	1,595	4,296	8,261	11,299	14,130	1
Other acute lower respiratory infections . . . . (J20–J22,U04)	278	43	24	4	2	3	4	8	21	42	43	84	–
Acute bronchitis and bronchiolitis . . . . (J20–J21)	182	40	22	3	1	2	2	3	11	25	25	48	–
Other and unspecified acute lower respiratory infections . . . . . (J22,U04)	96	3	2	1	1	1	2	5	10	17	18	36	–
Chronic lower respiratory diseases . . . . (J40–J47)	147,382	10	39	106	197	368	732	2,987	17,138	38,712	49,746	37,345	2
Bronchitis, chronic and unspecified . . . . (J40–J42)	358	4	7	2	4	3	3	13	44	76	82	120	–
Emphysema . . . . (J43)	7,905	1	–	1	1	2	34	179	983	2,205	2,716	1,783	–
Asthma . . . . (J45–J46)	3,602	2	26	95	181	322	366	480	580	574	487	489	–
Other chronic lower respiratory diseases . . . . (J44,J47)	135,517	3	6	8	11	41	329	2,315	15,531	35,857	46,461	34,953	2
Pneumoconioses and chemical effects . . . . (J60–J66,J68,U07.0)	562	–	–	2	1	3	5	13	39	135	196	168	–
Pneumonitis due to solids and liquids . . . . (J69)	20,052	8	5	7	49	132	278	599	1,763	3,647	5,892	7,672	–
Other diseases of respiratory system . . . . (J00–J06,J30–J39,J67,J70–J98)	48,082	172	103	99	143	319	641	1,584	5,054	11,010	15,433	13,522	2
Peptic ulcer . . . . (K25–K28)	4,105	–	1	2	8	34	116	285	624	995	1,069	971	–
Diseases of appendix . . . . (K35–K38)	487	3	1	4	4	11	20	36	81	91	115	121	–
Hernia . . . . (K40–K46)	2,712	10	9	5	6	9	49	126	316	528	699	955	–
Chronic liver disease and cirrhosis . . . . (K70,K73–K74)	54,803	1	2	2	58	1,786	5,501	9,401	16,484	13,178	6,428	1,959	3
Alcoholic liver disease . . . . (K70)	30,910	–	–	–	46	1,508	4,335	6,688	10,362	6,017	1,683	270	1
Other chronic liver disease and cirrhosis . . . . (K73–K74)	23,893	1	2	2	12	278	1,166	2,713	6,122	7,161	4,745	1,689	2
Cholelithiasis and other disorders of gallbladder . . . . (K80–K82)	4,483	1	–	1	18	21	48	131	396	904	1,360	1,603	–
Nephritis, nephrotic syndrome and nephrosis . . . . (N00–N07,N17–N19,N25–N27)	57,937	38	4	11	64	358	1,029	2,679	6,668	12,948	17,003	17,135	–
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . (N00–N01,N04)	810	2	1	4	2	4	12	30	80	135	255	285	–
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . (N02–N03,N05–N07,N26)	330	–	–	2	5	14	20	38	47	85	75	44	–
Renal failure . . . . (N17–N19)	56,756	36	3	5	57	340	995	2,608	6,535	12,718	16,661	16,798	–
Other disorders of kidney . . . . (N25,N27)	41	–	–	–	–	–	2	3	6	10	12	8	–
Infections of kidney . . . . (N10–N12,N13.6,N15.1)	1,205	4	3	3	5	15	37	78	142	285	356	276	1
Hyperplasia of prostate . . . . (N40)	839	–	–	–	–	–	–	8	39	103	244	445	–
Inflammatory diseases of female pelvic organs . . . . (N70–N76)	232	–	–	–	7	3	19	15	44	50	47	47	–
Pregnancy, childbirth and the puerperium . . . . (O00–O99)	1,263	...	...	5	164	591	489	12	1	1	–	–	–
Pregnancy with abortive outcome . . . . (O00–O07)	33	...	...	–	5	18	10	–	–	–	–	–	–
Other complications of pregnancy, childbirth and the puerperium . . . . (O10–O99)	1,230	...	...	5	159	573	479	12	1	1	–	–	–
Certain conditions originating in the perinatal period . . . . (P00–P96)	10,203	10,068	62	28	15	7	5	3	5	5	1	4	–
Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	10,149	3,970	441	446	412	490	542	783	1,310	842	559	354	–

See footnotes at end of table.

Table 7. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	All ages	Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	34,110	2,691	305	133	598	1,334	1,699	2,099	3,634	5,003	6,010	10,582	22
All other diseases. . . . .(residual)	410,973	563	417	802	1,995	5,670	10,832	18,951	40,782	68,055	103,290	159,609	7
Accidents (unintentional injuries). . . . . (V01–X59,Y85–Y86)	227,039	1,354	1,288	1,652	14,669	33,058	36,972	31,394	34,017	23,150	22,392	27,074	19
Transport accidents . . . . (V01–V99,Y85)	49,178	80	386	945	7,215	8,797	7,586	6,545	7,273	5,482	3,435	1,431	3
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)	46,027	79	366	900	6,997	8,406	7,084	6,080	6,567	4,949	3,219	1,377	3
Other land transport accidents . . . . (V01,V05–V06,V09.1, V09.3–V09.9,V10–V11,V15–V18,V19.3,V19.8–V19.9, V80.0–V80.2,V80.6–V80.9,V81.2–V81.9, V82.2–V82.9,V87.9, V88.9,V89.1,V89.3–V89.9)	1,195	1	13	19	106	184	207	157	240	174	74	20	–
Water, air and space, and other and unspecified transport accidents and their sequelae. . . . . (V90–V99,Y85)	1,956	–	7	26	112	207	295	308	466	359	142	34	–
Nontransport accidents . . . .(W00–X59,Y86)	177,861	1,274	902	707	7,454	24,261	29,386	24,849	26,744	17,668	18,957	25,643	16
Falls . . . .(W00–W19)	46,630	6	21	21	149	383	682	1,200	3,247	6,698	13,396	20,825	2
Accidental discharge of firearms. . . . .(W32–W34)	463	–	49	35	120	69	55	42	36	31	18	8	–
Accidental drowning and submersion. . . . .(W65–W74)	4,168	39	458	222	454	500	502	421	562	552	321	135	2
Accidental exposure to smoke, fire and flames. . . . .(X00–X09)	3,478	15	85	158	125	180	232	311	689	864	555	264	–
Accidental poisoning and exposure to noxious substances . . . .(X40–X49)	102,958	28	75	99	6,205	22,295	26,767	21,364	19,334	5,924	697	159	11
Other and unspecified nontransport accidents and their sequelae . . . . (W20–W31,W35–W64, W75–W99,X10–X39,X50–X59,Y86)	20,164	1,186	214	172	401	834	1,148	1,511	2,876	3,599	3,970	4,252	1
Intentional self-harm (suicide). . . . . (*U03,X60–X84,Y87.0)	49,476	. . .	. . .	502	6,040	8,663	8,185	7,781	7,864	5,396	3,549	1,493	3
Intentional self-harm (suicide) by discharge of firearms . . . . .(X72–X74)	27,032	. . .	. . .	180	3,246	4,230	3,759	3,838	4,412	3,536	2,686	1,145	–
Intentional self-harm (suicide) by other and unspecified means and their sequelae. . . . . (*U03,X60–X71,X75–X84,Y87.0)	22,444	. . .	. . .	322	2,794	4,433	4,426	3,943	3,452	1,860	863	348	3
Assault (homicide). . . . .(*U01–*U02,X85–Y09,Y87.1)	24,849	252	343	546	6,262	6,712	4,765	2,740	1,824	877	399	127	2
Assault (homicide) by discharge of firearms . . . . (*U01.4,X93–X95)	19,651	16	77	395	5,814	5,836	3,861	1,947	1,080	422	163	40	–
Assault (homicide) by other and unspecified means and their sequelae. . . . . (*U01.0–*U01.3,*U01.5–*U01.9,*U02, X85–X92,X96–Y09,Y87.1)	5,198	236	266	151	448	876	904	793	744	455	236	87	2
Legal intervention . . . .(Y35,Y89.0)	810	–	–	1	120	248	209	134	70	23	5	–	–
Events of undetermined intent . . . . (Y10–Y34,Y87.2,Y89.9)	5,604	123	127	98	403	1,014	1,174	1,025	959	458	153	69	1
Discharge of firearms, undetermined intent . . . .(Y22–Y24)	415	–	14	18	103	94	62	45	41	20	14	4	–
Other and unspecified events of undetermined intent and their sequelae . . . .(Y10–Y21,Y25–Y34,Y87.2,Y89.9)	5,189	123	113	80	300	920	1,112	980	918	438	139	65	1
Operations of war and their sequelae. . . . .(Y36,Y89.1)	7	–	–	–	–	–	2	1	–	1	3	–	–
Complications of medical and surgical care. . . . . (Y40–Y84,Y88)	3,726	20	15	22	41	72	148	289	653	1,003	912	551	–

See footnotes at end of table.

Table 7. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	All ages	Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older	Age not stated
Enterocolitis due to *Clostridium difficile*.....................(A04.7)[1]	4,231	1	–	–	5	10	46	135	419	989	1,383	1,243	–
COVID-19..(U07.1)[1]	186,552	141	101	131	447	1,640	3,841	9,678	24,252	42,062	51,188	53,070	1
Dementia-related causes[1]	292,881	10	16	23	9	16	52	371	3,946	22,770	83,437	182,229	2
Drug-induced deaths[1]	112,109	72	182	160	6,782	23,565	28,427	23,169	21,350	6,983	1,103	304	12
Drug overdose deaths[1]......................................	107,941	71	182	160	6,696	23,029	27,583	22,352	20,252	6,434	930	241	11
Alcohol-induced deaths[1]	51,191	1	–	1	200	2,992	7,429	10,852	16,718	9,745	2,752	496	5
Firearm-related injuries[1]......................................	48,204	16	140	628	9,363	10,436	7,904	5,981	5,625	4,030	2,884	1,197	–

– Quantity zero.
… Category not applicable.
[1]Included in selected categories above. For list of ICD–10 codes included, see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 8. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
All causes	984.1	558.0	28.0	15.3	79.5	163.4	255.4	453.3	992.1	1,978.7	4,708.2	14,389.6
Salmonella infections . . . .(A01–A02)	0.0	*	*	*	*	*	*	*	*	*	0.1	*
Shigellosis and amebiasis . . . . (A03,A06)	*	*	*	*	*	*	*	*	*	*	*	*
Certain other intestinal infections . . . . (A04,A07–A09)	2.2	3.8	0.1	*	*	0.1	0.2	0.6	1.8	4.9	12.9	33.3
Tuberculosis . . . .(A16–A19)	0.2	*	*	*	*	0.0	0.1	0.1	0.3	0.4	0.7	1.3
Respiratory tuberculosis . . . .(A16)	0.1	*	*	*	*	*	0.0	0.1	0.2	0.3	0.5	1.0
Other tuberculosis . . . .(A17–A19)	0.1	*	*	*	*	*	*	*	0.1	0.1	0.2	*
Whooping cough . . . .(A37)	*	*	*	*	*	*	*	*	*	*	*	*
Scarlet fever and erysipelas . . . . (A38,A46)	*	*	*	*	*	*	*	*	*	*	*	*
Meningococcal infection . . . .(A39)	0.0	*	*	*	*	*	*	*	*	*	*	*
Septicemia . . . .(A40–A41)	12.7	3.3	0.4	0.1	0.3	1.0	2.3	6.2	14.7	31.4	66.9	145.4
Syphilis . . . .(A50–A53)	0.0	*	*	*	*	*	*	*	*	*	*	*
Acute poliomyelitis . . . .(A80)	*	*	*	*	*	*	*	*	*	*	*	*
Arthropod-borne viral encephalitis . . . .(A83–A84,A85.2)	*	*	*	*	*	*	*	*	*	*	*	*
Measles . . . .(B05)	*	*	*	*	*	*	*	*	*	*	*	*
Viral hepatitis . . . .(B15–B19)	0.9	*	*	*	*	0.1	0.3	0.9	2.5	3.3	1.7	1.7
Human immunodeficiency virus (HIV) disease . . . .(B20–B24)	1.5	*	*	*	0.1	1.1	1.8	2.5	3.3	2.7	1.5	0.9
Malaria . . . .(B50–B54)	*	*	*	*	*	*	*	*	*	*	*	*
Other and unspecified infectious and parasitic diseases and their sequelae . . . . (A00,A05,A20–A36,A42–A44,A48–A49, A54–A79,A81–A82,A85.0–A85.1,A85.8,A86–B04, B06–B09,B25–B49,B55–B99,U07.1)	59.4	7.8	1.6	0.6	1.2	4.0	9.6	25.8	61.9	132.7	309.2	851.8
Malignant neoplasms . . . .(C00–C97)	182.5	1.1	1.8	2.0	3.2	8.0	25.6	82.5	249.8	529.4	979.3	1,573.5
Malignant neoplasms of lip, oral cavity and pharynx . . . .(C00–C14)	3.6	*	*	*	*	0.1	0.5	2.1	6.9	10.8	15.6	22.3
Malignant neoplasm of esophagus . . . .(C15)	4.8	*	*	*	*	0.1	0.5	2.6	8.2	16.3	23.4	25.1
Malignant neoplasm of stomach . . . .(C16)	3.3	*	*	*	*	0.3	1.0	2.3	4.9	8.7	15.2	25.2
Malignant neoplasms of colon, rectum and anus . . . .(C18–C21)	16.3	*	*	*	0.1	0.8	3.8	12.5	24.9	41.4	72.8	153.3
Malignant neoplasms of liver and intrahepatic bile ducts . . . .(C22)	8.7	*	*	*	0.1	0.3	0.9	3.3	14.5	31.6	41.3	46.3
Malignant neoplasm of pancreas . . . .(C25)	14.5	*	*	*	*	0.2	1.1	5.9	20.9	45.7	81.3	106.2
Malignant neoplasm of larynx . . . .(C32)	1.2	*	*	*	*	*	0.1	0.5	2.3	4.2	5.3	5.9
Malignant neoplasms of trachea, bronchus and lung . . . .(C33–C34)	39.6	*	*	*	*	0.3	1.8	11.1	58.0	131.9	232.6	260.0
Malignant melanoma of skin . . . .(C43)	2.5	*	*	*	*	0.2	0.7	1.4	3.2	6.7	12.3	23.0
Malignant neoplasm of breast . . . .(C50)	12.8	*	*	*	*	0.8	4.2	10.1	19.4	31.8	56.3	116.7
Malignant neoplasm of cervix uteri . . . .(C53)	1.2	*	*	*	*	0.3	1.3	2.0	2.2	2.5	2.9	4.1
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . .(C54–C55)	3.8	*	*	*	*	0.1	0.5	1.8	6.1	13.4	18.6	21.8
Malignant neoplasm of ovary . . . .(C56)	4.0	*	*	*	0.1	0.2	0.7	2.6	6.5	11.4	20.3	25.1
Malignant neoplasm of prostate . . . .(C61)	10.0	*	*	*	*	*	0.0	0.9	6.6	24.8	66.2	157.5
Malignant neoplasms of kidney and renal pelvis . . . .(C64–C65)	4.3	*	*	0.1	0.0	0.1	0.5	2.3	6.3	12.5	22.9	36.8
Malignant neoplasm of bladder . . . .(C67)	5.2	*	*	*	*	0.0	0.2	0.8	3.9	11.6	33.5	84.2
Malignant neoplasms of meninges, brain and other parts of central nervous system . . . .(C70–C72)	5.4	*	0.4	0.7	0.5	1.0	1.9	4.2	9.2	15.9	21.2	21.8

See footnotes at end of table.

Table 8. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81–C96)	17.1	*	0.7	0.5	0.9	1.3	2.3	5.4	15.6	42.6	107.9	194.9
Hodgkin disease (C81)	0.3	*	*	*	*	0.1	0.1	0.3	0.3	0.8	1.6	2.5
Non-Hodgkin lymphoma (C82–C85)	5.9	*	*	0.0	0.1	0.3	0.7	1.9	5.5	15.0	38.1	67.9
Leukemia (C91–C95)	7.0	*	0.6	0.4	0.7	0.8	1.2	2.2	5.8	16.6	43.2	82.0
Multiple myeloma and immunoproliferative neoplasms (C88,C90)	3.8	*	*	*	*	*	0.2	1.1	3.8	10.1	24.8	41.9
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96)	0.1	*	*	*	*	*	*	*	0.1	0.1	0.3	0.7
All other and unspecified malignant neoplasms (C17,C23–C24, C26–C31,C37–C41,C44–C49,C51–C52,C57–C60, C62–C63,C66,C68–C69,C73–C80,C97)	24.3	*	0.6	0.7	1.4	1.9	3.7	10.6	30.3	65.6	129.7	243.2
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	4.8	0.9	0.2	0.1	0.2	0.2	0.6	1.2	3.4	10.0	29.8	76.3
Anemias (D50–D64)	1.8	*	*	0.1	0.2	0.3	0.5	0.7	1.5	3.3	8.6	30.7
Diabetes mellitus (E10–E14)	30.4	*	*	0.1	0.7	2.6	6.6	18.2	41.4	79.8	150.6	287.3
Nutritional deficiencies (E40–E64)	6.3	*	*	*	*	0.1	0.3	0.7	2.4	8.1	31.2	174.9
Malnutrition (E40–E46)	6.2	*	*	*	*	0.1	0.2	0.6	2.2	7.8	30.6	172.2
Other nutritional deficiencies (E50–E64)	0.1	*	*	*	*	*	*	0.1	0.2	0.3	0.5	2.7
Meningitis (G00,G03)	0.2	1.2	*	*	*	0.1	0.1	0.2	0.2	0.4	0.5	0.7
Parkinson disease (G20–G21)	12.0	*	*	*	*	*	*	0.2	2.1	19.0	102.1	225.4
Alzheimer disease (G30)	36.0	*	*	*	*	*	*	0.3	3.5	26.7	206.2	1,131.5
Major cardiovascular diseases (I00–I78)	281.0	9.2	1.1	0.8	2.4	10.5	35.8	101.3	256.6	541.0	1,381.5	5,246.4
Diseases of heart (I00–I09,I11,I13,I20–I51)	210.9	6.5	0.7	0.5	1.9	8.3	28.1	79.9	203.7	415.7	1,016.6	3,835.8
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	1.3	*	*	*	*	0.1	0.3	0.5	1.1	2.4	6.9	21.7
Hypertensive heart disease (I11)	21.6	*	*	*	0.1	1.2	4.9	11.6	24.1	39.1	84.6	408.0
Hypertensive heart and renal disease (I13)	4.8	*	*	*	*	0.1	0.4	1.1	2.5	6.7	24.5	120.4
Ischemic heart diseases (I20–I25)	111.5	*	*	*	0.2	2.2	11.3	42.6	119.7	246.0	558.4	1,802.1
Acute myocardial infarction (I21–I22)	31.2	*	*	*	0.1	0.9	4.3	15.1	39.8	76.4	157.0	391.8
Other acute ischemic heart diseases (I24)	1.4	*	*	*	*	0.0	0.2	0.8	2.0	3.4	6.7	19.3
Other forms of chronic ischemic heart disease (I20,I25)	78.8	*	*	*	0.1	1.3	6.9	26.7	77.9	166.3	394.6	1,391.0
Atherosclerotic cardiovascular disease, so described (I25.0)	24.5	*	*	*	0.0	0.8	4.0	15.0	39.8	65.5	101.7	258.3
All other forms of chronic ischemic heart disease (I20,I25.1–I25.9)	54.3	*	*	*	0.1	0.5	2.8	11.7	38.2	100.7	292.9	1,132.6
Other heart diseases (I26–I51)	71.7	6.2	0.7	0.5	1.5	4.7	11.1	24.0	56.4	121.5	342.2	1,483.5
Acute and subacute endocarditis (I33)	0.5	*	*	*	*	0.2	0.4	0.5	0.8	1.2	2.0	3.0
Diseases of pericardium and acute myocarditis (I30–I31,I40)	0.4	*	*	*	0.0	0.1	0.1	0.2	0.4	0.9	1.6	3.4
Heart failure (I50)	26.4	*	*	*	0.1	0.5	1.6	4.9	13.8	37.3	129.8	675.0
All other forms of heart disease (I26–I28, I34–I38,I42–I49,I51)	44.4	5.6	0.6	0.4	1.3	3.9	9.0	18.4	41.3	82.2	208.7	802.1
Essential hypertension and hypertensive renal disease (I10,I12,I15)	13.0	*	*	*	0.1	0.4	1.6	4.5	11.8	24.6	61.6	254.0
Cerebrovascular diseases (I60–I69)	49.6	2.4	0.3	0.2	0.4	1.3	4.9	13.8	33.7	84.0	265.0	1,043.9

See footnotes at end of table.

Table 8. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
Atherosclerosis . . . . (I70)	1.2	*	*	*	*	*	*	0.2	0.7	2.0	5.7	29.0
Other diseases of circulatory system . . . . . . (I71–I78)	6.3	*	*	*	0.1	0.4	1.2	3.0	6.7	14.6	32.7	83.8
Aortic aneurysm and dissection . . . . . . (I71)	3.0	*	*	*	0.1	0.3	0.8	1.8	3.4	6.6	15.8	35.6
Other diseases of arteries, arterioles and capillaries . . . . (I72–I78)	3.3	*	*	*	0.0	0.2	0.4	1.1	3.3	8.1	17.0	48.2
Other disorders of circulatory system . . . . . . (I80–I99)	1.6	*	*	*	0.1	0.4	1.1	1.5	2.2	3.0	5.8	13.7
Influenza and pneumonia . . . . (J09–J18)	14.1	4.2	0.9	0.3	0.4	1.1	2.3	4.7	12.0	27.8	72.9	244.2
Influenza . . . . (J09–J11)	1.8	*	0.4	0.2	0.1	0.2	0.5	0.8	1.8	3.4	8.4	26.4
Pneumonia . . . . (J12–J18)	12.3	3.9	0.5	0.1	0.2	0.8	1.8	3.9	10.2	24.4	64.5	217.9
Other acute lower respiratory infections . . . . . (J20–J22,U04)	0.1	1.2	0.2	*	*	*	*	*	0.0	0.1	0.2	1.3
Acute bronchitis and bronchiolitis . . . . . (J20–J21)	0.1	1.1	0.1	*	*	*	*	*	*	0.1	0.1	0.7
Other and unspecified acute lower respiratory infections . . . . (J22,U04)	0.0	*	*	*	*	*	*	*	*	*	*	0.6
Chronic lower respiratory diseases . . . . . . (J40–J47)	44.2	*	0.3	0.3	0.4	0.8	1.7	7.4	40.7	114.6	283.9	575.8
Bronchitis, chronic and unspecified . . . . . (J40–J42)	0.1	*	*	*	*	*	*	*	0.1	0.2	0.5	1.9
Emphysema . . . . (J43)	2.4	*	*	*	*	*	0.1	0.4	2.3	6.5	15.5	27.5
Asthma . . . . (J45–J46)	1.1	*	0.2	0.2	0.4	0.7	0.8	1.2	1.4	1.7	2.8	7.5
Other chronic lower respiratory diseases . . . . . (J44,J47)	40.7	*	*	*	*	0.1	0.8	5.7	36.9	106.1	265.2	538.9
Pneumoconioses and chemical effects . . . . . (J60–J66,J68,U07.0)	0.2	*	*	*	*	*	*	*	0.1	0.4	1.1	2.6
Pneumonitis due to solids and liquids . . . . . (J69)	6.0	*	*	*	0.1	0.3	0.6	1.5	4.2	10.8	33.6	118.3
Other diseases of respiratory system . . . . (J00–J06,J30–J39,J67,J70–J98)	14.4	4.7	0.7	0.2	0.3	0.7	1.5	3.9	12.0	32.6	88.1	208.5
Peptic ulcer . . . . (K25–K28)	1.2	*	*	*	*	0.1	0.3	0.7	1.5	2.9	6.1	15.0
Diseases of appendix . . . . (K35–K38)	0.1	*	*	*	*	*	0.0	0.1	0.2	0.3	0.7	1.9
Hernia . . . . (K40–K46)	0.8	*	*	*	*	*	0.1	0.3	0.8	1.6	4.0	14.7
Chronic liver disease and cirrhosis . . . . . (K70,K73–K74)	16.4	*	*	*	0.1	3.9	12.6	23.3	39.2	39.0	36.7	30.2
Alcoholic liver disease . . . . (K70)	9.3	*	*	*	0.1	3.3	9.9	16.5	24.6	17.8	9.6	4.2
Other chronic liver disease and cirrhosis . . . . . (K73–K74)	7.2	*	*	*	*	0.6	2.7	6.7	14.5	21.2	27.1	26.0
Cholelithiasis and other disorders of gallbladder . . . . . (K80–K82)	1.3	*	*	*	*	0.0	0.1	0.3	0.9	2.7	7.8	24.7
Nephritis, nephrotic syndrome and nephrosis . . . . . (N00–N07,N17–N19,N25–N27)	17.4	1.0	*	*	0.1	0.8	2.4	6.6	15.8	38.3	97.0	264.2
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . . (N00–N01,N04)	0.2	*	*	*	*	*	*	0.1	0.2	0.4	1.5	4.4
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . . (N02–N03,N05–N07,N26)	0.1	*	*	*	*	*	0.0	0.1	0.1	0.3	0.4	0.7
Renal failure . . . . (N17–N19)	17.0	1.0	*	*	0.1	0.7	2.3	6.5	15.5	37.6	95.1	259.0
Other disorders of kidney . . . . (N25,N27)	0.0	*	*	*	*	*	*	*	*	*	*	*
Infections of kidney . . . . (N10–N12,N13.6,N15.1)	0.4	*	*	*	*	*	0.1	0.2	0.3	0.8	2.0	4.3
Hyperplasia of prostate . . . . (N40)	0.3	*	*	*	*	*	*	*	0.1	0.3	1.4	6.9
Inflammatory diseases of female pelvic organs . . . . . (N70–N76)	0.1	*	*	*	*	*	*	*	0.1	0.1	0.3	0.7
Pregnancy, childbirth and the puerperium . . . . . (O00–O99)	0.4	…	…	*	0.4	1.3	1.1	*	*	*	*	*
Pregnancy with abortive outcome . . . . . (O00–O07)	0.0	…	…	*	*	*	*	*	*	*	*	*
Other complications of pregnancy, childbirth and the puerperium . . . . . (O10–O99)	0.4	…	…	*	0.4	1.3	1.1	*	*	*	*	*
Certain conditions originating in the perinatal period . . . . . (P00–P96)	3.1	273.4	0.4	0.1	*	*	*	*	*	*	*	*

See footnotes at end of table.

Table 8. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	3.0	107.8	3.0	1.1	0.9	1.1	1.2	1.9	3.1	2.5	3.2	5.5
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	10.2	73.1	2.1	0.3	1.3	2.9	3.9	5.2	8.6	14.8	34.3	163.2
All other diseases. . . . . (residual)	123.3	15.3	2.8	2.0	4.5	12.5	24.8	46.9	96.9	201.4	589.5	2,460.9
Accidents (unintentional injuries). . . . . (V01–X59,Y85–Y86)	68.1	36.8	8.7	4.0	33.1	72.7	84.6	77.6	80.8	68.5	127.8	417.4
Transport accidents . . . . (V01–V99,Y85)	14.8	2.2	2.6	2.3	16.3	19.3	17.4	16.2	17.3	16.2	19.6	22.1
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)	13.8	2.1	2.5	2.2	15.8	18.5	16.2	15.0	15.6	14.6	18.4	21.2
Other land transport accidents . . . . (V01,V05–V06,V09.1, V09.3–V09.9,V10–V11,V15–V18,V19.3,V19.8–V19.9, V80.0–V80.2,V80.6–V80.9,V81.2–V81.9, V82.2–V82.9,V87.9, V88.9,V89.1,V89.3,V89.9)	0.4	*	*	*	0.2	0.4	0.5	0.4	0.6	0.5	0.4	0.3
Water, air and space, and other and unspecified transport accidents and their sequelae. . . . . (V90–V99,Y85)	0.6	*	*	0.1	0.3	0.5	0.7	0.8	1.1	1.1	0.8	0.5
Nontransport accidents . . . . (W00–X59,Y86)	53.4	34.6	6.1	1.7	16.8	53.3	67.3	61.5	63.5	52.3	108.2	395.4
Falls . . . . (W00–W19)	14.0	*	0.1	0.1	0.3	0.8	1.6	3.0	7.7	19.8	76.5	321.1
Accidental discharge of firearms. . . . . (W32–W34)	0.1	*	0.3	0.1	0.3	0.2	0.1	0.1	0.1	0.1	*	*
Accidental drowning and submersion. . . . . (W65–W74)	1.3	1.1	3.1	0.5	1.0	1.1	1.1	1.0	1.3	1.6	1.8	2.1
Accidental exposure to smoke, fire and flames. . . . . (X00–X09)	1.0	*	0.6	0.4	0.3	0.4	0.5	0.8	1.6	2.6	3.2	4.1
Accidental poisoning and exposure to noxious substances . . . . (X40–X49)	30.9	0.8	0.5	0.2	14.0	49.0	61.3	52.8	45.9	17.5	4.0	2.5
Other and unspecified nontransport accidents and their sequelae . . . . (W20–W31,W35–W64, W75–W99,X10–X39,X50–X59,Y86)	6.1	32.2	1.4	0.4	0.9	1.8	2.6	3.7	6.8	10.7	22.7	65.6
Intentional self-harm (suicide). . . . . (*U03,X60–X84,Y87.0)	14.8	…	…	1.2	13.6	19.0	18.7	19.2	18.7	16.0	20.3	23.0
Intentional self-harm (suicide) by discharge of firearms . . . . (X72–X74)	8.1	…	…	0.4	7.3	9.3	8.6	9.5	10.5	10.5	15.3	17.7
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . (*U03,X60–X71,X75–X84,Y87.0)	6.7	…	…	0.8	6.3	9.7	10.1	9.8	8.2	5.5	4.9	5.4
Assault (homicide). . . . . (*U01–*U02,X85–Y09,Y87.1)	7.5	6.8	2.3	1.3	14.1	14.8	10.9	6.8	4.3	2.6	2.3	2.0
Assault (homicide) by discharge of firearms . . . . (*U01.4,X93–X95)	5.9	*	0.5	1.0	13.1	12.8	8.8	4.8	2.6	1.2	0.9	0.6
Assault (homicide) by other and unspecified means and their sequelae . . . . (*U01.0–*U01.3,*U01.5–*U01.9,*U02, X85–X92,X96–Y09,Y87.1)	1.6	6.4	1.8	0.4	1.0	1.9	2.1	2.0	1.8	1.3	1.3	1.3
Legal intervention . . . . (Y35,Y89.0)	0.2	*	*	*	0.3	0.5	0.5	0.3	0.2	0.1	*	*
Events of undetermined intent . . . . (Y10–Y34,Y87.2,Y89.9)	1.7	3.3	0.9	0.2	0.9	2.2	2.7	2.5	2.3	1.4	0.9	1.1
Discharge of firearms, undetermined intent . . . . (Y22–Y24)	0.1	*	*	*	0.2	0.2	0.1	0.1	0.1	0.1	*	*
Other and unspecified events of undetermined intent and their sequelae . . . . (Y10–Y21,Y25–Y34,Y87.2,Y89.9)	1.6	3.3	0.8	0.2	0.7	2.0	2.5	2.4	2.2	1.3	0.8	1.0

See footnotes at end of table.

Table 8. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by age: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	All ages[1]	Younger than 1[2]	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
Operations of war and their sequelae . . . . (Y36,Y89.1)	*	*	*	*	*	*	*	*	*	*	*	*
Complications of medical and surgical care . . . . (Y40–Y84,Y88)	1.1	0.5	*	0.1	0.1	0.2	0.3	0.7	1.6	3.0	5.2	8.5
Enterocolitis due to *Clostridium difficile* . . . . (A04.7)[3]	1.3	*	*	*	*	*	0.1	0.3	1.0	2.9	7.9	19.2
COVID-19 . . . .(U07.1)[3]	56.0	3.8	0.7	0.3	1.0	3.6	8.8	23.9	57.6	124.5	292.2	818.2
Dementia-related causes[3]	87.9	*	*	0.1	*	*	0.1	0.9	9.4	67.4	476.2	2,809.6
Drug-induced deaths[3]	33.6	2.0	1.2	0.4	15.3	51.8	65.1	57.3	50.7	20.7	6.3	4.7
Drug overdose deaths[3]	32.4	1.9	1.2	0.4	15.1	50.6	63.1	55.3	48.1	19.0	5.3	3.7
Alcohol-induced deaths[3]	15.4	*	*	*	0.5	6.6	17.0	26.8	39.7	28.8	15.7	7.6
Firearm-related injuries[3]	14.5	*	0.9	1.5	21.1	22.9	18.1	14.8	13.4	11.9	16.5	18.5

0.0 Quantity more than zero but less than 0.05.

* Estimate does not meet National Center for Health Statistics standards of reliability; 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 younger than 1 (based on population estimates) differ from infant mortality rates (based on live births); see Technical Notes.

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

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non–Hispanic, single race[3] | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	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	3,279,857	1,719,250	1,560,607	275,684	155,240	120,444	23,613	12,721	10,892	89,591	46,137	43,454	411,934	219,538	192,396	4,592	2,461	2,131	2,448,093	1,267,526	1,180,567
Salmonella infections . . . . (A01–A02)	82	49	33	13	10	3	–	–	–	6	5	1	12	6	6	1	–	1	50	28	22
Shigellosis and amebiasis. . . . . . .(A03,A06)	17	8	9	7	5	2	–	–	–	–	–	–	2	–	2	–	–	–	8	3	5
Certain other intestinal infections . . . .(A04,A07–A09)	7,380	3,030	4,350	625	284	341	57	21	36	182	73	109	765	338	427	12	6	6	5,674	2,273	3,401
Tuberculosis. . . . . . (A16–A19)	565	354	211	101	75	26	13	6	7	147	101	46	94	57	37	3	1	2	206	113	93
Respiratory tuberculosis . . . . (A16)	391	258	133	72	55	17	10	5	5	118	87	31	63	40	23	3	1	2	124	69	55
Other tuberculosis . . . . (A17–A19)	174	96	78	29	20	9	3	1	2	29	14	15	31	17	14	–	–	–	82	44	38
Whooping cough . . . . . . (A37)	2	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	1	1
Scarlet fever and erysipelas. . . . .(A38,A46)	3	1	2	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	2
Meningococcal infection . . . . (A39)	27	16	11	9	6	3	–	–	–	1	–	1	10	4	6	–	–	–	6	5	1
Septicemia . . . . (A40–A41)	42,261	20,977	21,284	3,259	1,652	1,607	316	148	168	968	508	460	7,134	3,403	3,731	70	34	36	30,197	15,053	15,144
Syphilis . . . . (A50–A53)	61	37	24	11	10	1	3	2	1	4	3	1	22	9	13	1	1	–	18	11	7
Acute poliomyelitis. . . . . (A80)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arthropod-borne viral encephalitis . . . .(A83–A84, A85.2)	6	5	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	5	1
Measles . . . . (B05)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Viral hepatitis . . . . . (B15–B19)	3,107	1,944	1,163	485	303	182	53	24	29	191	111	80	417	268	149	12	10	2	1,899	1,198	701
Human immunodeficiency virus (HIV) disease . . . . (B20–B24)	4,941	3,802	1,139	751	614	137	41	30	11	50	48	2	2,401	1,674	727	5	3	2	1,613	1,371	242
Malaria. . . . . (B50–B54)	8	7	1	–	–	–	–	–	–	–	–	–	4	3	1	–	–	–	4	4	–
Other and unspecified infectious and parasitic diseases and their sequelae. . . . . (A00,A05, A20–A36,A42–A44, A48–A49,A54–A79, A81–A82,A85.0–A85.1, A85.8,A86–B04,B06–B09, B25–B49,B55–B99,U07.1)	198,029	108,820	89,209	21,584	12,533	9,051	1,815	918	897	5,863	3,334	2,529	23,358	11,579	11,779	307	170	137	143,767	79,535	64,232
Malignant neoplasms . . . . (C00–C97)	608,371	319,336	289,035	47,021	24,146	22,875	3,137	1,497	1,640	19,864	10,023	9,841	70,698	35,442	35,256	849	400	449	462,834	245,676	217,158

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Male	Female	Hispanic[2] Both sexes	Male	Female	American Indian and Alaska Native Both sexes	Male	Female	Asian Both sexes	Male	Female	Black Both sexes	Male	Female	Native Hawaiian or Other Pacific Islander Both sexes	Male	Female	White Both sexes	Male	Female
Malignant neoplasms of lip, oral cavity and pharynx . . . . . . (C00–C14)	11,884	8,434	3,450	706	510	196	67	41	26	489	336	153	1,171	853	318	26	18	8	9,324	6,593	2,731
Malignant neoplasm of esophagus . . . . (C15)	16,016	12,699	3,317	848	676	172	73	53	20	351	272	79	1,200	842	358	18	16	2	13,424	10,760	2,664
Malignant neoplasm of stomach . . . . (C16)	10,853	6,437	4,416	2,061	1,148	913	86	45	41	864	503	361	1,863	1,067	796	25	16	9	5,877	3,607	2,270
Malignant neoplasms of colon, rectum and anus . . . . (C18–C21)	54,268	29,029	25,239	4,958	2,778	2,180	345	186	159	2,011	1,096	915	7,025	3,723	3,302	77	41	36	39,487	21,000	18,487
Malignant neoplasms of liver and intrahepatic bile ducts . . . . (C22)	28,937	18,884	10,053	4,047	2,580	1,467	234	126	108	1,667	1,070	597	3,535	2,376	1,159	67	47	20	19,152	12,512	6,640
Malignant neoplasm of pancreas . . . . (C25)	48,323	25,186	23,137	3,895	1,958	1,937	241	102	139	1,634	773	861	5,867	2,841	3,026	64	27	37	36,314	19,310	17,004
Malignant neoplasm of larynx . . . . (C32)	3,933	3,125	808	238	205	33	22	17	5	60	52	8	609	480	129	–	–	–	2,980	2,356	624
Malignant neoplasms of trachea, bronchus and lung . . . . (C33–C34)	131,982	69,413	62,569	5,822	3,282	2,540	672	299	373	3,920	2,150	1,770	14,046	7,737	6,309	167	79	88	106,506	55,422	51,084
Malignant melanoma of skin . . . . (C43)	8,243	5,357	2,886	270	153	117	12	7	5	63	36	27	125	60	65	1	–	1	7,731	5,075	2,656
Malignant neoplasm of breast . . . . (C50)	42,672	461	42,211	3,483	27	3,456	201	1	200	1,429	11	1,418	6,413	95	6,318	67	1	66	30,793	321	30,472
Malignant neoplasm of cervix uteri . . . . (C53)	4,051	. . .	4,051	593	. . .	593	30	. . .	30	162	. . .	162	649	. . .	649	20	. . .	20	2,567	. . .	2,567
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . . (C54–C55)	12,764	. . .	12,764	1,153	. . .	1,153	56	. . .	56	444	. . .	444	2,671	. . .	2,671	32	. . .	32	8,326	. . .	8,326
Malignant neoplasm of ovary . . . . (C56)	13,214	. . .	13,214	1,217	. . .	1,217	60	. . .	60	533	. . .	533	1,312	. . .	1,312	21	. . .	21	9,991	. . .	9,991
Malignant neoplasm of prostate . . . . (C61)	33,363	33,363	. . .	2,475	2,475	. . .	133	133	. . .	714	714	. . .	5,543	5,543	. . .	33	33	. . .	24,274	24,274	. . .
Malignant neoplasms of kidney and renal pelvis . . . . (C64–C65)	14,488	9,519	4,969	1,364	921	443	121	79	42	385	234	151	1,422	910	512	16	8	8	11,087	7,304	3,783
Malignant neoplasm of bladder . . . . (C67)	17,334	12,460	4,874	819	586	233	57	35	22	357	252	105	1,313	833	480	16	12	4	14,693	10,688	4,005

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| | | | | | | | | | | | | | | | | | Non–Hispanic, single race[3] | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Malignant neoplasms of meninges, brain and other parts of central nervous system . . . . (C70–C72)	17,937	10,082	7,855	1,503	817	686	60	39	21	483	271	212	1,237	651	586	28	11	17	14,506	8,215	6,291
Malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C81–C96)	56,959	32,511	24,448	4,832	2,670	2,162	203	100	103	1,761	999	762	5,912	3,156	2,756	69	37	32	43,852	25,354	18,498
Hodgkin disease . . . . (C81)	1,056	643	413	150	94	56	3	2	1	24	15	9	99	66	33	–	–	–	770	463	307
Non-Hodgkin lymphoma . . . . (C82–C85)	19,794	11,300	8,494	1,753	965	788	65	33	32	740	430	310	1,439	823	616	22	10	12	15,667	8,976	6,691
Leukemia . . . . (C91–C95)	23,324	13,487	9,837	1,897	1,051	846	72	34	38	676	396	280	2,031	1,084	947	33	18	15	18,476	10,820	7,656
Multiple myeloma and immunoproliferative neoplasms . . . . (C88,C90)	12,616	6,992	5,624	1,020	552	468	62	31	31	312	153	159	2,325	1,174	1,151	14	9	5	8,810	5,028	3,782
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C96)	169	89	80	12	8	4	1	–	1	9	5	4	18	9	9	–	–	–	129	67	62
All other and unspecified malignant neoplasms . . . . (C17,C23–C24, C26–C31,C37–C41, C44–C49,C51–C52, C57–C60,C62–C63,C66, C68–C69,C73–C80,C97)	81,150	42,376	38,774	6,737	3,360	3,377	464	234	230	2,537	1,254	1,283	8,785	4,275	4,510	102	54	48	61,950	32,885	29,065
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior . . . . (D00–D48)	16,034	8,467	7,567	1,019	524	495	67	32	35	447	215	232	1,541	721	820	19	7	12	12,857	6,919	5,938
Anemias . . . . (D50–D64)	6,021	2,768	3,253	417	198	219	35	15	20	164	78	86	1,251	585	666	10	2	8	4,107	1,872	2,235
Diabetes mellitus . . . . (E10–E14)	101,209	57,557	43,652	12,508	7,033	5,475	1,219	659	560	3,709	1,982	1,727	17,954	9,371	8,583	303	160	143	64,701	37,886	26,815
Nutritional deficiencies . . . . . (E40–E64)	21,020	7,760	13,260	1,190	468	722	121	44	77	469	168	301	2,053	834	1,219	13	3	10	17,082	6,202	10,880
Malnutrition . . . . (E40–E46)	20,552	7,555	12,997	1,161	456	705	114	40	74	464	167	297	2,008	816	1,192	13	3	10	16,703	6,032	10,671
Other nutritional deficiencies. . . . (E50–E64)	468	205	263	29	12	17	7	4	3	5	1	4	45	18	27	–	–	–	379	170	209

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Male	Female	Hispanic[2] Both sexes	Male	Female	American Indian and Alaska Native Both sexes	Male	Female	Asian Both sexes	Male	Female	Black Both sexes	Male	Female	Native Hawaiian or Other Pacific Islander Both sexes	Male	Female	White Both sexes	Male	Female
													Non–Hispanic, single race[3]								
Meningitis . . . . (G00,G03)	604	348	256	77	47	30	5	3	2	25	21	4	130	74	56	2	–	2	359	199	160
Parkinson disease. . . . . (G20–G21)	39,915	24,503	15,412	2,508	1,430	1,078	113	63	50	1,232	742	490	1,919	1,093	826	19	13	6	33,969	21,065	12,904
Alzheimer disease . . . . . (G30)	120,122	37,475	82,647	9,552	2,904	6,648	337	110	227	3,448	1,069	2,379	9,284	2,749	6,535	98	28	70	96,899	30,434	66,465
Major cardiovascular diseases. . . . . (I00–I78)	936,436	492,088	444,348	67,463	36,990	30,473	4,838	2,629	2,209	27,175	14,066	13,109	122,434	64,109	58,325	1,418	776	642	706,141	369,268	336,873
Diseases of heart . . . . (I00–I09,I11,I13,I20–I51)	702,880	386,766	316,114	47,715	27,442	20,273	3,753	2,152	1,601	18,091	9,980	8,111	88,964	48,430	40,534	1,004	575	429	537,969	294,757	243,212
Acute rheumatic fever and chronic rheumatic heart diseases . . . . . (I00–I09)	4,294	1,522	2,772	279	112	167	31	15	16	147	55	92	365	125	240	15	6	9	3,423	1,196	2,227
Hypertensive heart disease . . . . (I11)	72,070	36,143	35,927	5,020	2,738	2,282	502	278	224	1,728	820	908	12,084	6,633	5,451	91	54	37	51,974	25,215	26,759
Hypertensive heart and renal disease. . . . . . (I13)	16,091	7,521	8,570	1,000	492	508	140	66	74	376	173	203	2,555	1,282	1,273	23	9	14	11,873	5,420	6,453
Ischemic heart diseases . . . . . (I20–I25)	371,506	223,952	147,554	27,594	16,840	10,754	1,973	1,211	762	10,956	6,538	4,418	43,103	24,839	18,264	551	335	216	284,345	172,181	112,164
Acute myocardial infarction. . . . (I21–I22)	103,905	62,571	41,334	7,805	4,664	3,141	572	346	226	3,133	1,855	1,278	11,888	6,695	5,193	164	90	74	79,750	48,545	31,205
Other acute ischemic heart diseases . . . . (I24)	4,823	2,756	2,067	257	165	92	35	20	15	111	66	45	785	477	308	4	3	1	3,594	2,003	1,591
Other forms of chronic ischemic heart disease . . . . . (I20,I25)	262,778	158,625	104,153	19,532	12,011	7,521	1,366	845	521	7,712	4,617	3,095	30,430	17,667	12,763	383	242	141	201,001	121,633	79,368
Atherosclerotic cardiovascular disease, so described . . . . (I25.0)	81,672	52,180	29,492	7,027	4,794	2,233	540	340	200	2,336	1,468	868	12,755	8,093	4,662	118	81	37	57,732	36,571	21,161
All other forms of chronic ischemic heart disease. . . . . . . (I20,I25.1–I25.9)	181,106	106,445	74,661	12,505	7,217	5,288	826	505	321	5,376	3,149	2,227	17,675	9,574	8,101	265	161	104	143,269	85,062	58,207
Other heart diseases . . . . . (I26–I51)	238,919	117,628	121,291	13,822	7,260	6,562	1,107	582	525	4,884	2,394	2,490	30,857	15,551	15,306	324	171	153	186,354	90,745	95,609
Acute and subacute endocarditis. . . . . (I33)	1,803	1,098	705	162	100	62	19	8	11	35	25	10	260	159	101	3	2	1	1,308	793	515

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Male	Female	Hispanic[2] Both sexes	Male	Female	American Indian and Alaska Native Both sexes	Male	Female	Asian Both sexes	Male	Female	Black Both sexes	Male	Female	Native Hawaiian or Other Pacific Islander Both sexes	Male	Female	White Both sexes	Male	Female
Diseases of pericardium and acute myocarditis . . . . (I30–I31,I40)	1,237	634	603	125	64	61	12	4	8	36	25	11	204	93	111	2	1	1	847	439	408
Heart failure. . . . . . (I50)	87,941	41,657	46,284	4,912	2,434	2,478	354	187	167	1,718	835	883	10,476	5,101	5,375	94	52	42	69,972	32,820	37,152
All other forms of heart disease . . . . (I26–I28, I34–I38,I42–I49,I51)	147,938	74,239	73,699	8,623	4,662	3,961	722	383	339	3,095	1,509	1,586	19,917	10,198	9,719	225	116	109	114,227	56,693	57,534
Essential hypertension and hypertensive renal disease . . . . (I10,I12,I15)	43,293	20,237	23,056	3,806	1,902	1,904	219	102	117	1,903	868	1,035	7,673	3,750	3,923	68	37	31	29,296	13,393	15,903
Cerebrovascular diseases . . . . (I60–I69)	165,393	71,819	93,574	14,224	6,673	7,551	747	308	439	6,482	2,852	3,630	22,656	10,293	12,363	298	137	161	119,929	51,042	68,887
Atherosclerosis. . . . . . . (I70)	3,936	1,889	2,047	288	144	144	13	9	4	132	54	78	373	186	187	4	2	2	3,095	1,477	1,618
Other diseases of circulatory system . . . . (I71–I78)	20,934	11,377	9,557	1,430	829	601	106	58	48	567	312	255	2,768	1,450	1,318	44	25	19	15,852	8,599	7,253
Aortic aneurysm and dissection . . . . (I71)	9,999	5,962	4,037	597	411	186	37	22	15	343	206	137	1,146	661	485	26	15	11	7,757	4,584	3,173
Other diseases of arteries, arterioles and capillaries . . . . (I72–I78)	10,935	5,415	5,520	833	418	415	69	36	33	224	106	118	1,622	789	833	18	10	8	8,095	4,015	4,080
Other disorders of circulatory system . . . . (I80–I99)	5,216	2,652	2,564	470	267	203	36	21	15	81	40	41	1,032	497	535	3	2	1	3,533	1,796	1,737
Influenza and pneumonia. . . . . . . (J09–J18)	47,052	24,060	22,992	4,166	2,177	1,989	392	198	194	1,766	908	858	5,335	2,772	2,563	63	26	37	34,951	17,775	17,176
Influenza. . . . . (J09–J11)	5,944	2,717	3,227	580	271	309	74	37	37	139	58	81	546	256	290	18	6	12	4,546	2,064	2,482
Pneumonia. . . . . . (J12–J18)	41,108	21,343	19,765	3,586	1,906	1,680	318	161	157	1,627	850	777	4,789	2,516	2,273	45	20	25	30,405	15,711	14,694
Other acute lower respiratory infections . . . . (J20–J22,U04)	278	128	150	34	18	16	2	1	1	9	5	4	38	21	17	1	1	–	191	80	111
Acute bronchitis and bronchiolitis . . . . (J20–J21)	182	89	93	27	15	12	1	1	–	7	5	2	32	18	14	–	–	–	114	49	65
Other and unspecified acute lower respiratory infections . . . . . . (J22,U04)	96	39	57	7	3	4	1	–	1	2	–	2	6	3	3	1	1	–	77	31	46
Chronic lower respiratory diseases. . . . . (J40–J47)	147,382	69,004	78,378	5,615	2,796	2,819	761	347	414	1,785	1,058	727	10,990	5,454	5,536	109	58	51	127,003	58,720	68,283
Bronchitis, chronic and unspecified. . . . . (J40–J42)	358	139	219	20	8	12	3	1	2	12	4	8	33	10	23	–	–	–	288	115	173
Emphysema . . . . (J43)	7,905	4,165	3,740	253	155	98	44	23	21	134	96	38	514	298	216	5	4	1	6,888	3,547	3,341
Asthma. . . . . (J45–J46)	3,602	1,415	2,187	383	162	221	35	12	23	121	53	68	1,012	472	540	9	4	5	1,972	684	1,288

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Total[1] Male	Total[1] Female	Hispanic[2] Both sexes	Hispanic[2] Male	Hispanic[2] Female	American Indian and Alaska Native Both sexes	American Indian and Alaska Native Male	American Indian and Alaska Native Female	Asian Both sexes	Asian Male	Asian Female	Black Both sexes	Black Male	Black Female	Native Hawaiian or Other Pacific Islander Both sexes	Native Hawaiian or Other Pacific Islander Male	Native Hawaiian or Other Pacific Islander Female	White Both sexes	White Male	White Female
Other chronic lower respiratory diseases . . . . (J44,J47)	135,517	63,285	72,232	4,959	2,471	2,488	679	311	368	1,518	905	613	9,431	4,674	4,757	95	50	45	117,855	54,374	63,481
Pneumoconioses and chemical effects . . . . (J60–J66, J68,U07.0)	562	521	41	20	19	1	7	7	–	2	2	–	17	14	3	–	–	–	512	475	37
Pneumonitis due to solids and liquids. . . . . . (J69)	20,052	11,751	8,301	1,342	733	609	91	49	42	700	395	305	2,322	1,314	1,008	18	13	5	15,435	9,153	6,282
Other diseases of respiratory system . . . . (J00–J06, J30–J39,J67,J70–J98)	48,082	24,822	23,260	4,049	2,110	1,939	299	148	151	1,323	694	629	4,746	2,307	2,439	36	19	17	37,344	19,384	17,960
Peptic ulcer . . . . . . (K25–K28)	4,105	2,191	1,914	358	211	147	32	17	15	163	82	81	431	255	176	5	3	2	3,079	1,597	1,482
Diseases of appendix . . . . . . (K35–K38)	487	267	220	46	31	15	4	3	1	15	5	10	81	50	31	1	1	–	337	175	162
Hernia . . . . (K40–K46)	2,712	1,223	1,489	245	114	131	24	9	15	41	18	23	209	108	101	1	1	–	2,172	960	1,212
Chronic liver disease and cirrhosis. . . . .(K70,K73–K74)	54,803	34,340	20,463	8,933	6,067	2,866	1,579	851	728	910	585	325	4,017	2,454	1,563	46	31	15	38,779	24,008	14,771
Alcoholic liver disease . . . . (K70)	30,910	21,059	9,851	5,126	4,018	1,108	1,202	685	517	415	314	101	2,218	1,423	795	26	20	6	21,553	14,357	7,196
Other chronic liver disease and cirrhosis . . . . . . (K73–K74)	23,893	13,281	10,612	3,807	2,049	1,758	377	166	211	495	271	224	1,799	1,031	768	20	11	9	17,226	9,651	7,575
Cholelithiasis and other disorders of gallbladder . . . . . . (K80–K82)	4,483	2,287	2,196	475	252	223	43	19	24	163	79	84	449	191	258	6	2	4	3,326	1,730	1,596
Nephritis, nephrotic syndrome and nephrosis . . . .(N00–N07, N17–N19,N25–N27)	57,937	30,178	27,759	5,299	2,808	2,491	434	227	207	1,985	1,041	944	10,921	5,349	5,572	121	60	61	38,813	20,470	18,343
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . (N00–N01,N04)	810	429	381	65	34	31	4	2	2	28	19	9	126	63	63	2	1	1	581	307	274
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . (N02–N03, N05–N07,N26)	330	196	134	20	10	10	5	4	1	24	18	6	44	17	27	1	–	1	229	142	87
Renal failure . . . . (N17–N19)	56,756	29,532	27,224	5,212	2,764	2,448	424	221	203	1,933	1,004	929	10,744	5,266	5,478	118	59	59	37,972	20,003	17,969

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

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Cause of death (based on ICD–10)	Total[1] Both sexes	Total[1] Male	Total[1] Female	Hispanic[2] Both sexes	Hispanic[2] Male	Hispanic[2] Female	American Indian and Alaska Native Both sexes	AIAN Male	AIAN Female	Asian Both sexes	Asian Male	Asian Female	Black Both sexes	Black Male	Black Female	Native Hawaiian or Other Pacific Islander Both sexes	NHOPI Male	NHOPI Female	White Both sexes	White Male	White Female
Other disorders of kidney . . . . (N25,N27)	41	21	20	2	–	2	1	–	1	–	–	–	7	3	4	–	–	–	31	18	13
Infections of kidney . . . . (N10–N12,N13.6,N15.1)	1,205	437	768	129	39	90	14	5	9	20	6	14	115	50	65	1	–	1	918	334	584
Hyperplasia of prostate . . . . (N40)	839	839	…	75	75	…	3	3	…	25	25	…	73	73	…	–	–	…	659	659	…
Inflammatory diseases of female pelvic organs . . . . (N70–N76)	232	…	232	29	…	29	3	…	3	10	…	10	40	…	40	–	…	–	148	…	148
Pregnancy, childbirth and the puerperium . . . . . (O00–O99)	1,263	…	1,263	227	…	227	26	…	26	46	…	46	395	…	395	5	…	5	551	…	551
Pregnancy with abortive outcome . . . . . . (O00–O07)	33	…	33	7	…	7	2	…	2	1	…	1	11	…	11	1	…	1	11	…	11
Other complications of pregnancy, childbirth and the puerperium . . . . (O10–O99)	1,230	…	1,230	220	…	220	24	…	24	45	…	45	384	…	384	4	…	4	540	…	540
Certain conditions originating in the perinatal period . . . . (P00–P96)	10,203	5,695	4,508	2,402	1,346	1,056	82	48	34	365	207	158	2,976	1,687	1,289	41	22	19	3,826	2,098	1,728
Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	10,149	5,276	4,873	1,865	959	906	82	42	40	251	137	114	1,530	797	733	24	8	16	6,147	3,208	2,939
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	34,110	17,133	16,977	2,954	1,810	1,144	307	197	110	762	383	379	5,299	2,865	2,434	49	26	23	24,235	11,538	12,697
All other diseases. . . .(residual)	410,973	179,851	231,122	28,956	13,645	15,311	2,873	1,363	1,510	9,208	3,911	5,297	45,588	20,363	25,225	440	215	225	321,231	138,958	182,273
Accidents (unintentional injuries) . . . . (V01–X59, Y85–Y86)	227,039	151,629	75,410	28,699	21,954	6,745	3,146	2,071	1,075	4,046	2,658	1,388	34,644	24,776	9,868	314	227	87	152,647	97,463	55,184
Transport accidents . . . .(V01–V99,Y85)	49,178	35,769	13,409	8,871	6,689	2,182	892	602	290	1,054	694	360	8,214	5,996	2,218	95	72	23	29,383	21,247	8,136

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| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non–Hispanic, single race[3] | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
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)	46,027	33,274	12,753	8,424	6,330	2,094	844	569	275	979	632	347	7,822	5,671	2,151	88	68	20	27,241	19,565	7,676
Other land transport accidents . . . . (V01, V05–V06,V09.1, V09.3–V09.9, V10–V11,V15–V18, V19.3,V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1,V89.3,V89.9)	1,195	951	244	245	202	43	24	16	8	34	29	5	169	144	25	2	1	1	703	547	156
Water, air and space, and other and unspecified transport accidents and their sequelae . . . .(V90–V99,Y85)	1,956	1,544	412	202	157	45	24	17	7	41	33	8	223	181	42	5	3	2	1,439	1,135	304
Nontransport accidents . . . . (W00–X59,Y86)	177,861	115,860	62,001	19,828	15,265	4,563	2,254	1,469	785	2,992	1,964	1,028	26,430	18,780	7,650	219	155	64	123,264	76,216	47,048
Falls . . . . (W00–W19)	46,630	23,819	22,811	2,884	1,757	1,127	246	139	107	1,348	744	604	2,161	1,238	923	47	28	19	39,679	19,755	19,924
Accidental discharge of firearms . . . .(W32–W34)	463	409	54	59	51	8	13	11	2	2	1	1	125	111	14	3	3	–	253	225	28
Accidental drowning and submersion . . . . (W65–W74)	4,168	3,092	1,076	700	572	128	61	40	21	169	123	46	642	502	140	15	12	3	2,488	1,775	713

See footnotes at end of table.

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| | | | | | | | | | | Non–Hispanic, single race[3] | | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	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 exposure to smoke, fire and flames . . . . . . (X00–X09)	3,478	2,079	1,399	241	157	84	35	23	12	52	25	27	676	397	279	1	–	1	2,428	1,445	983
Accidental poisoning and exposure to noxious substances . . . . (X40–X49)	102,958	73,988	28,970	14,137	11,433	2,704	1,665	1,093	572	1,002	822	180	19,979	14,792	5,187	117	93	24	63,851	44,176	19,675
Other and unspecified nontransport accidents and their sequelae . . . . (W20–W31, W35–W64,W75–W99, X10–X39,X50–X59,Y86)	20,164	12,473	7,691	1,807	1,295	512	234	163	71	419	249	170	2,847	1,740	1,107	36	19	17	14,565	8,840	5,725
Intentional self-harm (suicide) . . . . . (*U03,X60–X84,X87.0)	49,476	39,273	10,203	5,122	4,128	994	650	475	175	1,459	1,025	434	3,826	3,069	757	95	75	20	37,481	29,861	7,620
Intentional self-harm (suicide) by discharge of firearms . . . . . . (X72–X74)	27,032	23,538	3,494	2,074	1,847	227	256	222	34	372	326	46	2,237	1,936	301	24	20	4	21,732	18,895	2,837
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03, X60–X71,X75–X84,X87.0)	22,444	15,735	6,709	3,048	2,281	767	394	253	141	1,087	699	388	1,589	1,133	456	71	55	16	15,749	10,966	4,783
Assault (homicide). . . . . (*U01–*U02,X85–Y09,Y87.1)	24,849	19,977	4,872	4,482	3,684	798	386	302	84	310	201	109	13,236	11,352	1,884	52	44	8	5,980	4,097	1,883
Assault (homicide) by discharge of firearms . . . . (*U01.4,X93–X95)	19,651	16,428	3,223	3,500	2,977	523	224	185	39	196	137	59	11,575	10,127	1,448	37	34	3	3,830	2,735	1,095
Assault (homicide) by other and unspecified means and their sequelae . . . . (*U01.0–*U01.3, *U01.5–*U01.9,*U02, X85–X92,X96–Y09,Y87.1)	5,198	3,549	1,649	982	707	275	162	117	45	114	64	50	1,661	1,225	436	15	10	5	2,150	1,362	788
Legal intervention . . . . (Y35,Y89.0)	810	762	48	191	183	8	33	33	–	13	11	2	198	183	15	1	1	–	364	342	22
Events of undetermined intent . . . . . (Y10–Y34,Y87.2,Y89.9)	5,604	3,666	1,938	552	404	148	103	70	33	107	72	35	1,340	931	409	7	6	1	3,390	2,122	1,268

See footnotes at end of table.

Table 9. Number of deaths from 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| | | | | | | | | | | | | | Non–Hispanic, single race[3] | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Discharge of firearms, undetermined intent . . . . (Y22–Y24)	415	312	103	60	48	12	9	6	3	3	2	1	124	102	22	–	–	–	214	151	63
Other and unspecified events of undetermined intent and their sequelae . . . . (Y10–Y21,Y25–Y34, Y87.2,Y89.9)	5,189	3,354	1,835	492	356	136	94	64	30	104	70	34	1,216	829	387	7	6	1	3,176	1,971	1,205
Operations of war and their sequelae . . . . . . (Y36,Y89.1)	7	7	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	6	6	–
Complications of medical and surgical care . . . .(Y40–Y84,Y88)	3,726	1,928	1,798	347	176	171	31	14	17	81	42	39	603	287	316	11	6	5	2,634	1,396	1,238
Enterocolitis due to *Clostridium difficile* . . . . (A04.7)[4]	4,231	1,808	2,423	347	159	188	30	7	23	106	45	61	429	203	226	7	5	2	3,277	1,372	1,905
COVID-19 . . . . (U07.1)[4]	186,552	102,660	83,892	20,499	11,923	8,576	1,690	861	829	5,450	3,120	2,330	21,896	10,778	11,118	285	157	128	135,484	75,114	60,370
Dementia-related causes[4]	292,881	97,470	195,411	19,213	6,209	13,004	897	300	597	7,591	2,463	5,128	23,599	7,687	15,912	202	70	132	240,132	80,270	159,862
Drug-induced deaths[4]	112,109	78,614	33,495	14,573	11,563	3,010	1,641	1,040	601	1,184	909	275	21,455	15,749	5,706	137	104	33	70,734	47,595	23,139
Drug overdose deaths[4]	107,941	75,814	32,127	14,131	11,228	2,903	1,543	980	563	1,142	875	267	20,725	15,222	5,503	125	96	29	67,974	45,811	22,163
Alcohol-induced deaths[4]	51,191	36,426	14,765	7,467	6,028	1,439	1,904	1,180	724	660	539	121	4,339	3,025	1,314	44	34	10	36,099	25,139	10,960
Firearm-related injuries[4]	48,204	41,302	6,902	5,853	5,081	772	530	452	78	583	474	109	14,203	12,410	1,793	65	58	7	26,323	22,285	4,038

– Quantity zero.
... Category not applicable.
[1] Includes deaths with origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.
[2] Includes people of Hispanic origin of any race; see Technical Notes.
[3] Only one race reported on death certificate; see Technical Notes.
[4] Included in selected categories above. For list of ICD–10 codes included, see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	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	984.1	1,040.2	928.9	433.0	481.0	383.7	975.4	1,062.4	890.2	441.9	472.3	413.6	979.2	1,085.4	880.8	722.1	765.3	677.9	1,247.6	1,299.7	1,196.1
Salmonella infections .... (A01–A02)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	0.0	0.0
Shigellosis and amebiasis........(A03,A06)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Certain other intestinal infections....(A04,A07–A09)	2.2	1.8	2.6	1.0	0.9	1.1	2.4	1.8	2.9	0.9	0.7	1.0	1.8	1.7	2.0	*	*	*	2.9	2.3	3.4
Tuberculosis...... (A16–A19)	0.2	0.2	0.1	0.2	0.2	0.1	*	*	*	0.7	1.0	0.4	0.2	0.3	0.2	*	*	*	0.1	0.1	0.1
Respiratory tuberculosis .... (A16)	0.1	0.2	0.1	0.1	0.2	*	*	*	*	0.6	0.9	0.3	0.1	0.2	0.1	*	*	*	0.1	0.1	0.1
Other tuberculosis .... (A17–A19)	0.1	0.1	0.0	0.0	0.1	*	*	*	*	0.1	*	*	0.1	*	*	*	*	*	0.0	0.0	0.0
Whooping cough ...... (A37)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Scarlet fever and erysipelas........(A38,A46)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Meningococcal infection............ (A39)	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Septicemia...... (A40–A41)	12.7	12.7	12.7	5.1	5.1	5.1	13.1	12.4	13.7	4.8	5.2	4.4	17.0	16.8	17.1	11.0	10.6	11.5	15.4	15.4	15.3
Syphilis .... (A50–A53)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	0.1	*	*	*	*	*	*	*	*
Acute poliomyelitis..... (A80)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Arthropod-borne viral encephalitis ....(A83–A84, A85.2)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Measles .... (B05)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viral hepatitis..... (B15–B19)	0.9	1.2	0.7	0.8	0.9	0.6	2.2	2.0	2.4	0.9	1.1	0.8	1.0	1.3	0.7	*	*	*	1.0	1.2	0.7
Human immunodeficiency virus (HIV) disease .... (B20–B24)	1.5	2.3	0.7	1.2	1.9	0.4	1.7	2.5	*	0.2	0.5	*	5.7	8.3	3.3	*	*	*	0.8	1.4	0.2
Malaria.......... (B50–B54)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other and unspecified infectious and parasitic diseases and their sequelae.........(A00,A05, A20–A36,A42–A44, A48–A49,A54–A79, A81–A82,A85.0–A85.1, A85.8,A86–B04,B06–B09, B25–B49,B55–B99,U07.1)	59.4	65.8	53.1	33.9	38.8	28.8	75.0	76.7	73.3	28.9	34.1	24.1	55.5	57.2	53.9	48.3	52.9	43.6	73.3	81.6	65.1
Malignant neoplasms .... (C00–C97)	182.5	193.2	172.0	73.9	74.8	72.9	129.6	125.0	134.0	98.0	102.6	93.7	168.0	175.2	161.4	133.5	124.4	142.8	235.9	251.9	220.0

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Malignant neoplasms of lip, oral cavity and pharynx . . . . . . (C00–C14)	3.6	5.1	2.1	1.1	1.6	0.6	2.8	3.4	2.1	2.4	3.4	1.5	2.8	4.2	1.5	4.1	*	*	4.8	6.8	2.8
Malignant neoplasm of esophagus . . . . (C15)	4.8	7.7	2.0	1.3	2.1	0.5	3.0	4.4	1.6	1.7	2.8	0.8	2.9	4.2	1.6	*	*	*	6.8	11.0	2.7
Malignant neoplasm of stomach . . . . (C16)	3.3	3.9	2.6	3.2	3.6	2.9	3.6	3.8	3.4	4.3	5.1	3.4	4.4	5.3	3.6	3.9	*	*	3.0	3.7	2.3
Malignant neoplasms of colon, rectum and anus . . . . (C18–C21)	16.3	17.6	15.0	7.8	8.6	6.9	14.3	15.5	13.0	9.9	11.2	8.7	16.7	18.4	15.1	12.1	12.7	11.5	20.1	21.5	18.7
Malignant neoplasm of liver and intrahepatic bile ducts . . . . (C22)	8.7	11.4	6.0	6.4	8.0	4.7	9.7	10.5	8.8	8.2	11.0	5.7	8.4	11.7	5.3	10.5	14.6	6.4	9.8	12.8	6.7
Malignant neoplasm of pancreas. . . . . (C25)	14.5	15.2	13.8	6.1	6.1	6.2	10.0	8.5	11.4	8.1	7.9	8.2	13.9	14.0	13.9	10.1	8.4	11.8	18.5	19.8	17.2
Malignant neoplasms of larynx . . . . (C32)	1.2	1.9	0.5	0.4	0.6	0.1	0.9	*	*	0.3	0.5	*	1.4	2.4	0.6	*	*	*	1.5	2.4	0.6
Malignant neoplasms of trachea, bronchus and lung . . . . (C33–C34)	39.6	42.0	37.2	9.1	10.2	8.1	27.8	25.0	30.5	19.3	22.0	16.8	33.4	38.3	28.9	26.3	24.6	28.0	54.3	56.8	51.8
Malignant melanoma of skin. . . . . (C43)	2.5	3.2	1.7	0.4	0.5	0.4	*	*	*	0.3	0.4	0.3	0.3	0.3	0.3	*	*	*	3.9	5.2	2.7
Malignant neoplasm of breast . . . . (C50)	12.8	0.3	25.1	5.5	0.1	11.0	8.3	*	16.3	7.0	*	13.5	15.2	0.5	28.9	10.5	*	21.0	15.7	0.3	30.9
Malignant neoplasm of cervix uteri . . . . (C53)	1.2	…	2.4	0.9	…	1.9	1.2	…	2.5	0.8	…	1.5	1.5	…	3.0	3.1	…	6.4	1.3	…	2.6
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . . (C54–C55)	3.8	…	7.6	1.8	…	3.7	2.3	…	4.6	2.2	…	4.2	6.3	…	12.2	5.0	…	10.2	4.2	…	8.4
Malignant neoplasm of ovary . . . . (C56)	4.0	…	7.9	1.9	…	3.9	2.5	…	4.9	2.6	…	5.1	3.1	…	6.0	3.3	…	6.7	5.1	…	10.1
Malignant neoplasm of prostate . . . . (C61)	10.0	20.2	…	3.9	7.7	…	5.5	11.1	…	3.5	7.3	…	13.2	27.4	…	5.2	10.3	…	12.4	24.9	…
Malignant neoplasms of kidney and renal pelvis . . . . (C64–C65)	4.3	5.8	3.0	2.1	2.9	1.4	5.0	6.6	3.4	1.9	2.4	1.4	3.4	4.5	2.3	*	*	*	5.7	7.5	3.8
Malignant neoplasm of bladder . . . . (C67)	5.2	7.5	2.9	1.3	1.8	0.7	2.4	2.9	1.8	1.8	2.6	1.0	3.1	4.1	2.2	*	*	*	7.5	11.0	4.1

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1]			Hispanic[2]			Non-Hispanic, single race[3] American Indian and Alaska Native			Asian			Black			Native Hawaiian or Other Pacific Islander			White		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Malignant neoplasms of meninges, brain and other parts of central nervous system . . . . (C70–C72)	5.4	6.1	4.7	2.4	2.5	2.2	2.5	3.3	1.7	2.4	2.8	2.0	2.9	3.2	2.7	4.4	*	*	7.4	8.4	6.4
Malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C81–C96)	17.1	19.7	14.6	7.6	8.3	6.9	8.4	8.4	8.4	8.7	10.2	7.3	14.1	15.6	12.6	10.9	11.5	10.2	22.3	26.0	18.7
Hodgkin disease . . . . (C81)	0.3	0.4	0.2	0.2	0.3	0.2	*	*	*	0.1	*	*	0.2	0.3	0.2	*	*	*	0.4	0.5	0.3
Non-Hodgkin lymphom . . . . (C82–C85)	5.9	6.8	5.1	2.8	3.0	2.5	2.7	2.8	2.6	3.6	4.4	3.0	3.4	4.1	2.8	3.5	*	*	8.0	9.2	6.8
Leukemia . . . . (C91–C95)	7.0	8.2	5.9	3.0	3.3	2.7	3.0	2.8	3.1	3.3	4.1	2.7	4.8	5.4	4.3	5.2	*	*	9.4	11.1	7.8
Multiple myeloma and immunoproliferative neoplasms . . . . (C88,C90)	3.8	4.2	3.3	1.6	1.7	1.5	2.6	2.6	2.5	1.5	1.6	1.5	5.5	5.8	5.3	*	*	*	4.5	5.2	3.8
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C96)	0.1	0.1	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.1	0.1	0.1
All other and unspecified malignant neoplasms . . . . (C17,C23–C24, C26–C31,C37–C41, C44–C49,C51–C52, C57–C60,C62–C63,C66, C68–C69,C73–C80,C97)	24.3	25.6	23.1	10.6	10.4	10.8	19.2	19.5	18.8	12.5	12.8	12.2	20.9	21.1	20.6	16.0	16.8	15.3	31.6	33.7	29.4
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior . . . . (D00–D48)	4.8	5.1	4.5	1.6	1.6	1.6	2.8	2.7	2.9	2.2	2.2	2.2	3.7	3.6	3.8	*	*	*	6.6	7.1	6.0
Anemias . . . . (D50–D64)	1.8	1.7	1.9	0.7	0.6	0.7	1.4	*	1.6	0.8	0.8	0.8	3.0	2.9	3.0	*	*	*	2.1	1.9	2.3
Diabetes mellitus . . . . (E10–E14)	30.4	34.8	26.0	19.6	21.8	17.4	50.4	55.0	45.8	18.3	20.3	16.4	42.7	46.3	39.3	47.6	49.8	45.5	33.0	38.8	27.2
Nutritional deficiencies . . . . . (E40–E64)	6.3	4.7	7.9	1.9	1.4	2.3	5.0	3.7	6.3	2.3	1.7	2.9	4.9	4.1	5.6	*	*	*	8.7	6.4	11.0
Malnutrition . . . . (E40–E46)	6.2	4.6	7.7	1.8	1.4	2.2	4.7	3.3	6.0	2.3	1.7	2.8	4.8	4.0	5.5	*	*	*	8.5	6.2	10.8
Other nutritional deficiencies . . . . (E50–E64)	0.1	0.1	0.2	0.0	*	*	*	*	*	*	*	*	0.1	*	0.1	*	*	*	0.2	0.2	0.2

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Meningitis . . . . (G00,G03)	0.2	0.2	0.2	0.1	0.1	0.1	*	*	*	0.1	0.2	*	0.3	0.4	0.3	*	*	*	0.2	0.2	0.2
Parkinson disease. . . . . (G20–G21)	12.0	14.8	9.2	3.9	4.4	3.4	4.7	5.3	4.1	6.1	7.6	4.7	4.6	5.4	3.8	*	*	*	17.3	21.6	13.1
Alzheimer disease . . . . . (G30)	36.0	22.7	49.2	15.0	9.0	21.2	13.9	9.2	18.6	17.0	10.9	22.6	22.1	13.6	29.9	15.4	8.7	22.3	49.4	31.2	67.3
Major cardiovascular diseases. . . . . (I00–I78)	281.0	297.7	264.5	106.0	114.6	97.1	199.8	219.6	180.5	134.0	144.0	124.8	291.0	317.0	267.0	223.0	241.3	204.2	359.9	378.7	341.3
Diseases of heart . . . . (I00–I09,I11,I13,I20–I51)	210.9	234.0	188.2	74.9	85.0	64.6	155.0	179.7	130.8	89.2	102.2	77.2	211.5	239.4	185.6	157.9	178.8	136.5	274.2	302.2	246.4
Acute rheumatic fever and chronic rheumatic heart diseases . . . . . (I00–I09)	1.3	0.9	1.6	0.4	0.3	0.5	1.3	*	*	0.7	0.6	0.9	0.9	0.6	1.1	*	*	*	1.7	1.2	2.3
Hypertensive heart disease . . . . (I11)	21.6	21.9	21.4	7.9	8.5	7.3	20.7	23.2	18.3	8.5	8.4	8.6	28.7	32.8	25.0	14.3	16.8	11.8	26.5	25.9	27.1
Hypertensive heart and renal disease. . . . . . (I13)	4.8	4.6	5.1	1.6	1.5	1.6	5.8	5.5	6.0	1.9	1.8	1.9	6.1	6.3	5.8	3.6	*	*	6.1	5.6	6.5
Ischemic heart diseases . . . . . (I20–I25)	111.5	135.5	87.8	43.3	52.2	34.3	81.5	101.1	62.3	54.0	66.9	42.0	102.5	122.8	83.6	86.6	104.2	68.7	144.9	176.6	113.6
Acute myocardial infarction. . . . (I21–I22)	31.2	37.9	24.6	12.3	14.4	10.0	23.6	28.9	18.5	15.5	19.0	12.2	28.3	33.1	23.8	25.8	28.0	23.5	40.6	49.8	31.6
Other acute ischemic heart diseases . . . . (I24)	1.4	1.7	1.2	0.4	0.5	0.3	1.4	1.7	*	0.5	0.7	0.4	1.9	2.4	1.4	*	*	*	1.8	2.1	1.6
Other forms of chronic ischemic heart disease . . . . . (I20,I25)	78.8	96.0	62.0	30.7	37.2	24.0	56.4	70.6	42.6	38.0	47.3	29.5	72.3	87.3	58.4	60.2	75.3	44.9	102.4	124.7	80.4
Atherosclerotic cardiovascular disease, so described . . . . (I25.0)	24.5	31.6	17.6	11.0	14.9	7.1	22.3	28.4	16.3	11.5	15.0	8.3	30.3	40.0	21.3	18.6	25.2	11.8	29.4	37.5	21.4
All other forms of chronic ischemic heart disease. . . . . . . (I20,I25.1–I25.9)	54.3	64.4	44.4	19.6	22.4	16.8	34.1	42.2	26.2	26.5	32.2	21.2	42.0	47.3	37.1	41.7	50.1	33.1	73.0	87.2	59.0
Other heart diseases . . . . . (I26–I51)	71.7	71.2	72.2	21.7	22.5	20.9	45.7	48.6	42.9	24.1	24.5	23.7	73.3	76.9	70.1	50.9	53.2	48.7	95.0	93.1	96.9
Acute and subacute endocarditis. . . . . (I33)	0.5	0.7	0.4	0.3	0.3	0.2	*	*	*	0.2	0.3	*	0.6	0.8	0.5	*	*	*	0.7	0.8	0.5

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Total[1] Male	Total[1] Female	Hispanic[2] Both sexes	Hispanic[2] Male	Hispanic[2] Female	American Indian and Alaska Native Both sexes	American Indian and Alaska Native Male	American Indian and Alaska Native Female	Asian Both sexes	Asian Male	Asian Female	Black Both sexes	Black Male	Black Female	Native Hawaiian or Other Pacific Islander Both sexes	Native Hawaiian or Other Pacific Islander Male	Native Hawaiian or Other Pacific Islander Female	White Both sexes	White Male	White Female
Diseases of pericardium and acute myocarditis . . . . (I30–I31,I40)	0.4	0.4	0.4	0.2	0.2	0.2	*	*	*	0.2	0.3	*	0.5	0.5	0.5	*	*	*	0.4	0.5	0.4
Heart failure. . . . . . (I50)	26.4	25.2	27.5	7.7	7.5	7.9	14.6	15.6	13.6	8.5	8.5	8.4	24.9	25.2	24.6	14.8	16.2	13.4	35.7	33.7	37.6
All other forms of heart disease . . . . (I26–I28, I34–I38,I42–I49,I51)	44.4	44.9	43.9	13.5	14.4	12.6	29.8	32.0	27.7	15.3	15.4	15.1	47.3	50.4	44.5	35.4	36.1	34.7	58.2	58.1	58.3
Essential hypertension and hypertensive renal disease . . . . (I10,I12,I15)	13.0	12.2	13.7	6.0	5.9	6.1	9.0	8.5	9.6	9.4	8.9	9.9	18.2	18.5	18.0	10.7	11.5	9.9	14.9	13.7	16.1
Cerebrovascular diseases . . . . (I60–I69)	49.6	43.5	55.7	22.3	20.7	24.1	30.9	25.7	35.9	32.0	29.2	34.5	53.9	50.9	56.6	46.9	42.6	51.2	61.1	52.3	69.8
Atherosclerosis. . . . . . (I70)	1.2	1.1	1.2	0.5	0.4	0.5	*	*	*	0.7	0.6	0.7	0.9	0.9	0.9	*	*	*	1.6	1.5	1.6
Other diseases of circulatory system . . . . (I71–I78)	6.3	6.9	5.7	2.2	2.6	1.9	4.4	4.8	3.9	2.8	3.2	2.4	6.6	7.2	6.0	6.9	7.8	*	8.1	8.8	7.3
Aortic aneurysm and dissection . . . . (I71)	3.0	3.6	2.4	0.9	1.3	0.6	1.5	1.8	*	1.7	2.1	1.3	2.7	3.3	2.2	4.1	*	*	4.0	4.7	3.2
Other diseases of arteries, arterioles and capillaries . . . . (I72–I78)	3.3	3.3	3.3	1.3	1.3	1.3	2.9	3.0	2.7	1.1	1.1	1.1	3.9	3.9	3.8	*	*	*	4.1	4.1	4.1
Other disorders of circulatory system . . . . (I80–I99)	1.6	1.6	1.5	0.7	0.8	0.6	1.5	1.8	*	0.4	0.4	0.4	2.5	2.5	2.4	*	*	*	1.8	1.8	1.8
Influenza and pneumonia. . . . . . . (J09–J18)	14.1	14.6	13.7	6.5	6.7	6.3	16.2	16.5	15.9	8.7	9.3	8.2	12.7	13.7	11.7	9.9	8.1	11.8	17.8	18.2	17.4
Influenza. . . . . . . (J09–J11)	1.8	1.6	1.9	0.9	0.8	1.0	3.1	3.1	3.0	0.7	0.6	0.8	1.3	1.3	1.3	*	*	*	2.3	2.1	2.5
Pneumonia. . . . . . (J12–J18)	12.3	12.9	11.8	5.6	5.9	5.4	13.1	13.4	12.8	8.0	8.7	7.4	11.4	12.4	10.4	7.1	6.2	8.0	15.5	16.1	14.9
Other acute lower respiratory infections . . . . (J20–J22,U04)	0.1	0.1	0.1	0.1	*	*	*	*	*	*	*	*	0.1	0.1	*	*	*	*	0.1	0.1	0.1
Acute bronchitis and bronchiolitis . . . . (J20–J21)	0.1	0.1	0.1	0.0	*	*	*	*	*	*	*	*	0.1	*	*	*	*	*	0.1	0.1	0.1
Other and unspecified acute lower respiratory infections . . . . . . (J22,U04)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	0.0	0.0
Chronic lower respiratory diseases. . . . . (J40–J47)	44.2	41.7	46.7	8.8	8.7	9.0	31.4	29.0	33.8	8.8	10.8	6.9	26.1	27.0	25.3	17.1	18.0	16.2	64.7	60.2	69.2
Bronchitis, chronic and unspecified . . . . . (J40–J42)	0.1	0.1	0.1	0.0	*	*	*	*	*	*	*	*	0.1	*	0.1	*	*	*	0.1	0.1	0.2
Emphysema . . . . (J43)	2.4	2.5	2.2	0.4	0.5	0.3	1.8	1.9	1.7	0.7	1.0	0.4	1.2	1.5	1.0	*	*	*	3.5	3.6	3.4
Asthma. . . . . (J45–J46)	1.1	0.9	1.3	0.6	0.5	0.7	1.4	*	1.9	0.6	0.5	0.6	2.4	2.3	2.5	*	*	*	1.0	0.7	1.3

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Other chronic lower respiratory diseases . . . . (J44,J47)	40.7	38.3	43.0	7.8	7.7	7.9	28.0	26.0	30.1	7.5	9.3	5.8	22.4	23.1	21.8	14.9	15.5	14.3	60.1	55.8	64.3
Pneumoconioses and chemical effects . . . . (J60–J66, J68,U07.0)	0.2	0.3	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.3	0.5	0.0
Pneumonitis due to solids and liquids . . . . . . (J69)	6.0	7.1	4.9	2.1	2.3	1.9	3.8	4.1	3.4	3.5	4.0	2.9	5.5	6.5	4.6	*	*	*	7.9	9.4	6.4
Other diseases of respiratory system . . . . (J00–J06, J30–J39,J67,J70–J98)	14.4	15.0	13.8	6.4	6.5	6.2	12.4	12.4	12.3	6.5	7.1	6.30	11.3	11.4	11.2	5.7	*	*	19.0	19.9	18.2
Peptic ulcer . . . . . . (K25–K28)	1.2	1.3	1.1	0.6	0.7	0.5	1.3	*	*	0.8	0.8	0.8	1.0	1.3	0.8	*	*	*	1.6	1.6	1.5
Diseases of appendix . . . . (K35–K38)	0.1	0.2	0.1	0.1	0.1	*	*	*	*	*	*	*	0.2	0.2	0.1	*	*	*	0.2	0.2	0.2
Hernia . . . . (K40–K46)	0.8	0.7	0.9	0.4	0.4	0.4	1.0	*	*	0.2	*	0.2	0.5	0.5	0.5	*	*	*	1.1	1.0	1.2
Chronic liver disease and cirrhosis . . . . . (K70,K73–K74)	16.4	20.8	12.2	14.0	18.8	9.1	65.2	71.1	59.5	4.5	6.0	3.1	9.5	12.1	7.2	7.2	9.6	*	19.8	24.6	15.0
Alcoholic liver disease . . . . (K70)	9.3	12.7	5.9	8.1	12.4	3.5	49.6	57.2	42.3	2.0	3.2	1.0	5.3	7.0	3.6	4.1	6.2	*	11.0	14.7	7.3
Other chronic liver disease and cirrhosis . . . . . . (K73–K74)	7.2	8.0	6.3	6.0	6.3	5.6	15.6	13.9	17.2	2.4	2.8	2.1	4.3	5.1	3.5	3.1	*	*	8.8	9.9	7.7
Cholelithiasis and other disorders of gallbladder . . . . . . (K80–K82)	1.3	1.4	1.3	0.7	0.8	0.7	1.8	*	2.0	0.8	0.8	0.8	1.1	0.9	1.2	*	*	*	1.7	1.8	1.6
Nephritis, nephrotic syndrome and nephrosis . . . . (N00–N07, N17–N19,N25–N27)	17.4	18.3	16.5	8.3	8.7	7.9	17.9	19.0	16.9	9.8	10.7	9.0	26.0	26.4	25.5	19.0	18.7	19.4	19.8	21.0	18.6
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . (N00–N01,N04)	0.2	0.3	0.2	0.1	0.1	0.1	*	*	*	0.1	*	*	0.3	0.3	0.3	*	*	*	0.3	0.3	0.3
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . (N02–N03, N05–N07,N26)	0.1	0.1	0.1	0.0	*	*	*	*	*	0.1	*	*	0.1	*	0.1	*	*	*	0.1	0.1	0.1
Renal failure . . . . (N17–N19)	17.0	17.9	16.2	8.2	8.6	7.8	17.5	18.5	16.6	9.5	10.3	8.8	25.5	26.0	25.1	18.6	18.3	18.8	19.4	20.5	18.2

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

Cause of death (based on ICD–10)	Total[1] Both sexes	Male	Female	Hispanic[2] Both sexes	Male	Female	American Indian and Alaska Native Both sexes	Male	Female	Asian Both sexes	Male	Female	Black Both sexes	Male	Female	Native Hawaiian or Other Pacific Islander Both sexes	Male	Female	White Both sexes	Male	Female
										Non-Hispanic, single race[3]											
Other disorders of kidney. . . . . (N25,N27)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	*	*
Infections of kidney . . . . (N10–N12,N13.6,N15.1)	0.4	0.3	0.5	0.2	0.1	0.3	*	*	*	0.1	*	*	0.3	0.2	0.3	*	*	*	0.5	0.3	0.6
Hyperplasia of prostate . . . . (N40)	0.3	0.5	…	0.1	0.2	…	*	*	…	0.1	0.3	…	0.2	0.4	…	*	*	…	0.3	0.7	…
Inflammatory diseases of female pelvic organs . . . . (N70–N76)	0.1	…	0.1	0.0	…	0.1	*	…	*	*	…	*	0.1	…	0.2	*	…	*	0.1	…	0.1
Pregnancy, childbirth and the puerperium . . . . . (O00–O99)	0.4	…	0.8	0.4	…	0.7	1.1	…	2.1	0.2	…	0.4	0.9	…	1.8	*	…	*	0.3	…	0.6
Pregnancy with abortive outcome . . . . . . (O00–O07)	0.0	…	0.0	*	…	*	*	…	*	*	…	*	*	…	*	*	…	*	*	…	*
Other complications of pregnancy, childbirth and the puerperium . . . . (O10–O99)	0.4	…	0.7	0.3	…	0.7	1.0	…	2.0	0.2	…	0.4	0.9	…	1.8	*	…	*	0.3	…	0.5
Certain conditions originating in the perinatal period. . . . . (P00–P96)	3.1	3.4	2.7	3.8	4.2	3.4	3.4	4.0	2.8	1.8	2.1	1.5	7.1	8.3	5.9	6.4	6.8	*	1.9	2.2	1.8
Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	3.0	3.2	2.9	2.9	3.0	2.9	3.4	3.5	3.3	1.2	1.4	1.1	3.6	3.9	3.4	3.8	*	*	3.1	3.3	3.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	10.2	10.4	10.1	4.6	5.6	3.6	12.7	16.5	9.0	3.8	3.9	3.6	12.6	14.2	11.1	7.7	8.1	7.3	12.4	11.8	12.9
All other diseases. . . . (residual)	123.3	108.8	137.6	45.5	42.3	48.8	118.7	113.8	123.4	45.4	40.0	50.4	108.4	100.7	115.5	69.2	66.9	71.6	163.7	142.5	184.7
Accidents (unintentional injuries) . . . . (V01–X59, Y85–Y86)	68.1	91.7	44.9	45.1	68.0	21.5	129.9	173.0	87.9	20.0	27.2	13.2	82.3	122.5	45.2	49.4	70.6	27.7	77.8	99.9	55.9
Transport accidents . . . . (V01–V99,Y85)	14.8	21.6	8.0	13.9	20.7	7.0	36.8	50.3	23.7	5.2	7.1	3.4	19.5	29.6	10.2	14.9	22.4	7.3	15.0	21.8	8.2

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

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| | | | | | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
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)	13.8	20.1	7.6	13.2	19.6	6.7	34.9	47.5	22.5	4.8	6.5	3.3	18.6	28.0	9.8	13.8	21.1	6.4	13.9	20.1	7.8
Other land transport accidents. . . . . (V01, V05–V06,V09.1, V09.3–V09.9, V10–V11,V15–V18, V19.3,V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1,V89.3,V89.9)	0.4	0.6	0.1	0.4	0.6	0.1	1.0	*	*	0.2	0.3	*	0.4	0.7	0.1	*	*	*	0.4	0.6	0.2
Water, air and space, and other and unspecified transport accidents and their sequelae . . . .(V90–V99,Y85)	0.6	0.9	0.2	0.3	0.5	0.1	1.0	*	*	0.2	0.3	*	0.5	0.9	0.2	*	*	*	0.7	1.2	0.3
Nontransport accidents . . . . (W00–X59,Y86)	53.4	70.1	36.9	31.1	47.3	14.5	93.1	122.7	64.2	14.8	20.1	9.8	62.8	92.8	35.0	34.4	48.2	20.4	62.8	78.2	47.7
Falls . . . . (W00–W19)	14.0	14.4	13.6	4.5	5.4	3.6	10.2	11.6	8.7	6.6	7.6	5.7	5.1	6.1	4.2	7.4	8.7	*	20.2	20.3	20.2
Accidental discharge of firearms . . . .(W32–W34)	0.1	0.2	0.0	0.1	0.2	*	*	*	*	*	*	*	0.3	0.5	*	*	*	*	0.1	0.2	0.0
Accidental drowning and submersion . . . . (W65–W74)	1.3	1.9	0.6	1.1	1.8	0.4	2.5	3.3	1.7	0.8	1.3	0.4	1.5	2.5	0.6	*	*	*	1.3	1.8	0.7

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to _Clostridium difficile_, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the _International Classification of Diseases, 10th Revision_ (ICD–10); see Technical Notes in this report]

| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	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 exposure to smoke, fire and flames . . . . . . (X00–X09)	1.0	1.3	0.8	0.4	0.5	0.3	1.4	1.9	*	0.3	0.3	0.3	1.6	2.0	1.3	*	*	*	1.2	1.5	1.0
Accidental poisoning and exposure to noxious substances . . . . (X40–X49)	30.9	44.8	17.2	22.2	35.4	8.6	68.8	91.3	46.7	4.9	8.4	1.7	47.5	73.1	23.7	18.4	28.9	7.6	32.5	45.3	19.9
Other and unspecified nontransport accidents and their sequelae . . . . (W20–W31, W35–W64,W75–W99, X10–X39,X50–X59,Y86)	6.1	7.5	4.6	2.8	4.0	1.6	9.7	13.6	5.8	2.1	2.5	1.6	6.8	8.6	5.1	5.7	*	*	7.4	9.1	5.8
Intentional self-harm (suicide) . . . . . (*U03,X60–X84,Y87.0)	14.8	23.8	6.1	8.0	12.8	3.2	26.8	39.7	14.3	7.2	10.5	4.1	9.1	15.2	3.5	14.9	23.3	6.4	19.1	30.6	7.7
Intentional self-harm (suicide) by discharge of firearms . . . . . . (X72–X74)	8.1	14.2	2.1	3.3	5.7	0.7	10.6	18.5	2.8	1.8	3.3	0.4	5.3	9.6	1.4	3.8	6.2	*	11.1	19.4	2.9
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03, X60–X71,X75–X84,Y87.0)	6.7	9.5	4.0	4.8	7.1	2.4	16.3	21.1	11.5	5.4	7.2	3.7	3.8	5.6	2.1	11.2	17.1	*	8.0	11.2	4.8
Assault (homicide) . . . . (*U01–*U02,X85–Y09,Y87.1)	7.5	12.1	2.9	7.0	11.4	2.5	15.9	25.2	6.9	1.5	2.1	1.0	31.5	56.1	8.6	8.2	13.7	*	3.0	4.2	1.9
Assault (homicide) by discharge of firearms . . . . . . (*U01.4,X93–X95)	5.9	9.9	1.9	5.5	9.2	1.7	9.3	15.5	3.2	1.0	1.4	0.6	27.5	50.1	6.6	5.8	10.6	*	2.0	2.8	1.1
Assault (homicide) by other and unspecified means and their sequelae . . . . (*U01.0–*U01.3, *U01.5–*U01.9,*U02, X85–X92,X96–Y09,Y87.1)	1.6	2.1	1.0	1.5	2.2	0.9	6.7	9.8	3.7	0.6	0.7	0.5	3.9	6.1	2.0	*	*	*	1.1	1.4	0.8
Legal intervention . . . . (Y35,Y89.0)	0.2	0.5	0.0	0.3	0.6	*	1.4	2.8	*	*	*	*	0.5	0.9	*	*	*	*	0.2	0.4	0.0
Events of undetermined intent . . . . . (Y10–Y34,Y87.2,Y89.9)	1.7	2.2	1.2	0.9	1.3	0.5	4.3	5.8	2.7	0.5	0.7	0.3	3.2	4.6	1.9	*	*	*	1.7	2.2	1.3

See footnotes at end of table.

Table 10. Death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes in this report]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Discharge of firearms, undetermined intent . . . . (Y22–Y24)	0.1	0.2	0.1	0.1	0.1	*	*	*	*	*	*	*	0.3	0.5	0.1	*	*	*	0.1	0.2	0.1
Other and unspecified events of undetermined intent and their sequelae . . . . (Y10–Y21,Y25–Y34, Y87.2,Y89.9)	1.6	2.0	1.1	0.8	1.1	0.4	3.9	5.3	2.5	0.5	0.7	0.3	2.9	4.1	1.8	*	*	*	1.6	2.0	1.2
Operations of war and their sequelae. . . . . . . (Y36,Y89.1)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Complications of medical and surgical care . . . . (Y40–Y84,Y88)	1.1	1.2	1.1	0.5	0.5	0.5	1.3	*	*	0.4	0.4	0.4	1.4	1.4	1.4	*	*	*	1.3	1.4	1.3
Enterocolitis due to *Clostridium difficile* . . . . (A04.7)[4]	1.3	1.1	1.4	0.5	0.5	0.6	1.2	*	1.9	0.5	0.5	0.6	1.0	1.0	1.0	*	*	*	1.7	1.4	1.9
COVID-19 . . . . (U07.1)[4]	56.0	62.1	49.9	32.2	36.9	27.3	69.8	71.9	67.8	26.9	31.9	22.2	52.0	53.3	50.9	44.8	48.8	40.7	69.0	77.0	61.2
Dementia-related causes[4]	87.9	59.0	116.3	30.2	19.2	41.4	37.1	25.1	48.8	37.4	25.2	48.8	56.1	38.0	72.8	31.8	21.8	42.0	122.4	82.3	162.0
Drug-induced deaths[4]	33.6	47.6	19.9	22.9	35.8	9.6	67.8	86.9	49.1	5.8	9.3	2.6	51.0	77.9	26.1	21.5	32.3	10.5	36.0	48.8	23.4
Drug overdose deaths[4]	32.4	45.9	19.1	22.2	34.8	9.2	63.7	81.8	46.0	5.6	9.0	2.5	49.3	75.3	25.2	19.7	29.9	9.2	34.6	47.0	22.5
Alcohol-induced deaths[4]	15.4	22.0	8.8	11.7	18.7	4.6	78.6	98.5	59.2	3.3	5.5	1.2	10.3	15.0	6.0	6.9	10.6	*	18.4	25.8	11.1
Firearm-related injuries[4]	14.5	25.0	4.1	9.2	15.7	2.5	21.9	37.7	6.4	2.9	4.9	1.0	33.8	61.4	8.2	10.2	18.0	*	13.4	22.9	4.1

0.0 Quantity more than zero but less than 0.05.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

. . . Category not applicable.

[1]Includes deaths with origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.

[2]Includes people of Hispanic origin of any race; see Technical Notes.

[3]Only one race was reported on the death certificate; see Technical Notes.

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

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Cause of death (based on ICD–10)	Total[1]			Hispanic[2]			Non-Hispanic, single race[3] American Indian and Alaska Native			Asian			Black			Native Hawaiian or Other Pacific Islander			White		
	Both sexes	Male	Female	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	798.8	954.5	666.1	614.7	748.8	498.4	947.9	1,084.3	816.1	417.5	501.7	350.7	1,002.8	1,257.5	809.0	782.0	859.5	705.4	822.2	972.1	692.7
Salmonella infections . . . . (A01–A02)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	0.0	0.0
Shigellosis and amebiasis . . . . (A03,A06)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Certain other intestinal infections . . . . (A04,A07–A09)	1.8	1.7	1.8	1.4	1.5	1.4	2.3	1.7	2.6	0.9	0.8	0.9	1.9	2.1	1.8	*	*	*	1.8	1.7	1.9
Tuberculosis . . . . . . (A16–A19)	0.1	0.2	0.1	0.2	0.4	0.1	*	*	*	0.7	1.1	0.4	0.2	0.3	0.1	*	*	*	0.1	0.1	0.1
Respiratory tuberculosis . . . . (A16)	0.1	0.1	0.0	0.2	0.3	*	*	*	*	0.5	0.9	0.2	0.1	0.2	0.1	*	*	*	0.0	0.0	0.0
Other tuberculosis . . . . (A17–A19)	0.0	0.0	0.0	0.1	0.1	*	*	*	*	0.1	*	*	0.1	*	*	*	*	*	0.0	0.0	0.0
Whooping cough . . . . . . (A37)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Scarlet fever and erysipelas . . . . (A38,A46)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Meningococcal infection . . . . (A39)	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Septicemia . . . . (A40–A41)	10.1	11.4	9.1	7.4	8.3	6.6	12.5	13.0	12.1	4.5	5.6	3.7	17.3	20.2	15.5	11.2	11.1	11.2	9.9	11.1	9.0
Syphilis . . . . (A50–A53)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	0.0	*	*	*	*	*	*	*	*
Acute poliomyelitis . . . . . (A80)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Arthropod-borne viral encephalitis . . . . (A83–A84, A85.2)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Measles . . . . (B05)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viral hepatitis . . . . . (B15–B19)	0.7	0.9	0.5	0.9	1.2	0.7	1.9	1.8	2.0	0.9	1.1	0.6	0.9	1.2	0.6	*	*	*	0.7	0.8	0.5
Human immunodeficiency virus (HIV) disease . . . . (B20–B24)	1.3	2.1	0.6	1.3	2.2	0.5	1.7	2.5	*	0.2	0.5	*	5.4	8.1	3.1	*	*	*	0.7	1.1	0.2
Malaria . . . . (B50–B54)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other and unspecified infectious and parasitic diseases and their sequelae . . . . (A00,A05, A20–A36,A42–A44, A48–A49,A54–A79, A81–A82,A85.0–A85.1, A85.8,A86–B04,B06–B09, B25–B49,B55–B99,U07.1)	47.3	60.0	37.7	49.5	65.5	37.4	71.0	77.9	65.3	27.2	36.7	20.3	57.4	71.0	49.0	52.8	63.4	44.3	46.7	59.2	37.2
Malignant neoplasms . . . . (C00–C97)	142.3	167.3	124.2	104.3	121.9	92.2	118.2	122.7	115.0	90.1	105.0	79.5	165.0	202.9	142.2	141.0	139.8	143.8	149.0	174.6	130.0

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

													Non-Hispanic, single race[3]										
	Total[1]			Hispanic[2]			American Indian and Alaska Native			Asian			Black			Native Hawaiian or Other Pacific Islander			White		
Cause of death (based on ICD–10)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Malignant neoplasms of lip, oral cavity and pharynx . . . . . . (C00–C14)	2.7	4.2	1.5	1.5	2.4	0.8	2.4	3.1	1.9	2.1	3.3	1.2	2.6	4.5	1.3	4.0	*	*	3.0	4.6	1.6
Malignant neoplasm of esophagus . . . . (C15)	3.7	6.4	1.4	1.8	3.1	0.7	2.6	4.1	1.4	1.6	2.7	0.6	2.6	4.4	1.4	*	*	*	4.3	7.4	1.6
Malignant neoplasm of stomach . . . . (C16)	2.6	3.4	2.0	4.4	5.4	3.6	3.3	3.8	2.9	3.9	5.2	2.9	4.4	6.1	3.3	4.1	*	*	1.9	2.6	1.4
Malignant neoplasms of colon, rectum and anus . . . . (C18–C21)	13.0	15.3	11.0	10.7	13.1	8.8	13.1	15.2	11.2	9.1	11.2	7.4	16.5	20.6	13.6	12.6	14.3	11.4	13.2	15.4	11.3
Malignant neoplasms of liver and intrahepatic bile ducts . . . . (C22)	6.6	9.3	4.2	8.8	12.1	6.0	8.3	9.7	7.1	7.5	10.8	4.8	7.7	12.0	4.6	10.6	15.2	6.2	6.0	8.4	3.9
Malignant neoplasm of pancreas . . . . (C25)	11.1	12.9	9.7	8.8	9.5	8.0	9.1	8.5	9.5	7.4	8.0	6.9	13.5	15.5	12.1	10.6	8.8	12.1	11.5	13.4	9.9
Malignant neoplasm of larynx . . . . (C32)	0.9	1.6	0.3	0.5	1.0	0.1	0.8	*	*	0.3	0.5	*	1.4	2.6	0.5	*	*	*	0.9	1.6	0.4
Malignant neoplasms of trachea, bronchus and lung . . . . (C33–C34)	30.1	35.2	26.0	13.6	17.6	10.7	24.7	24.2	25.2	17.8	22.6	14.2	32.3	43.3	24.8	29.0	29.1	29.1	33.2	37.9	29.5
Malignant melanoma of skin . . . . (C43)	2.0	2.8	1.3	0.6	0.7	0.5	*	*	*	0.3	0.4	0.2	0.3	0.4	0.3	*	*	*	2.6	3.7	1.7
Malignant neoplasm of breast . . . . (C50)	10.3	0.2	18.8	7.4	0.1	13.5	7.7	*	14.4	6.4	*	11.5	15.2	0.5	26.1	10.6	*	20.4	10.3	0.2	19.0
Malignant neoplasm of cervix uteri . . . . (C53)	1.1	…	2.1	1.2	…	2.2	1.3	…	2.6	0.7	…	1.3	1.5	…	2.8	3.1	…	6.3	1.0	…	2.0
Malignant neoplasms of corpus uteri and uterus, part unspecified . . . . (C54–C55)	2.9	…	5.4	2.4	…	4.5	2.0	…	3.8	2.0	…	3.5	5.9	…	10.2	5.3	…	10.2	2.6	…	4.9
Malignant neoplasm of ovary . . . . (C56)	3.1	…	5.8	2.6	…	4.7	2.2	…	4.1	2.4	…	4.3	3.0	…	5.2	3.3	…	6.5	3.3	…	6.1
Malignant neoplasm of prostate . . . . (C61)	7.7	18.6	…	6.3	15.4	…	5.2	12.0	…	3.4	8.3	…	13.7	36.5	…	6.3	13.8	…	7.5	17.8	…
Malignant neoplasms of kidney and renal pelvis . . . . (C64–C65)	3.4	5.0	2.1	3.0	4.5	1.8	4.7	6.8	3.1	1.7	2.4	1.2	3.3	5.0	2.1	*	*	*	3.6	5.2	2.2
Malignant neoplasm of bladder . . . . (C67)	4.1	6.9	2.0	2.1	3.6	1.0	2.2	3.0	1.5	1.7	2.8	0.9	3.3	5.4	2.0	*	*	*	4.6	7.8	2.2

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Malignant neoplasms of meninges, brain and other parts of central nervous system . . . . (C70–C72)	4.3	5.2	3.5	3.0	3.4	2.6	2.3	3.1	1.6	2.2	2.7	1.7	2.8	3.4	2.4	4.5	*	*	5.1	6.2	4.1
Malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C81–C96)	13.6	17.6	10.4	10.8	13.4	8.9	7.9	8.2	7.7	8.1	10.7	6.3	14.3	18.6	11.4	11.8	12.4	11.0	14.2	18.5	10.8
Hodgkin disease . . . . (C81)	0.3	0.3	0.2	0.3	0.5	0.2	*	*	*	0.1	*	*	0.2	0.3	0.1	*	*	*	0.3	0.4	0.2
Non-Hodgkin lymphoma . . . . (C82–C85)	4.7	6.1	3.6	4.1	5.0	3.4	2.5	2.7	2.4	3.4	4.6	2.5	3.5	4.7	2.6	3.7	*	*	5.0	6.5	3.8
Leukemia . . . . (C91–C95)	5.6	7.4	4.3	4.0	5.0	3.3	2.8	2.8	2.8	3.1	4.2	2.3	4.9	6.5	3.9	5.6	*	*	6.1	8.0	4.6
Multiple myeloma and immunoproliferative neoplasms . . . . (C88,C90)	2.9	3.7	2.3	2.4	2.9	2.0	2.4	2.6	2.3	1.4	1.6	1.3	5.6	7.0	4.7	*	*	*	2.8	3.6	2.1
Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue . . . . (C96)	0.0	0.1	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	0.0	0.0
All other and unspecified malignant neoplasms . . . . (C17,C23–C24, C26–C31,C37–C41, C44–C49,C51–C52, C57–C60,C62–C63,C66, C68–C69,C73–C80,C97)	19.2	22.6	16.6	14.9	16.4	13.7	17.6	18.9	16.3	11.6	13.2	10.3	20.7	24.2	18.3	16.5	18.1	15.0	20.1	23.8	17.3
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior . . . . (D00–D48)	3.8	4.7	3.2	2.4	2.9	2.1	2.7	2.7	2.6	2.1	2.4	1.9	3.8	4.6	3.5	*	*	*	4.1	5.2	3.4
Anemias . . . . (D50–D64)	1.5	1.6	1.4	1.0	1.1	0.9	1.4	*	1.4	0.8	0.9	0.7	3.0	3.3	2.9	*	*	*	1.3	1.4	1.2
Diabetes mellitus . . . . (E10–E14)	24.1	30.5	18.8	28.3	34.7	22.9	47.7	55.1	40.8	17.2	21.5	13.9	42.9	52.8	35.5	49.9	53.8	46.0	21.3	27.6	16.0
Nutritional deficiencies . . . . . (E40–E64)	5.0	4.6	5.3	3.2	3.1	3.2	5.1	4.3	5.7	2.2	2.0	2.4	5.6	5.9	5.2	*	*	*	5.4	4.8	5.8
Malnutrition . . . . (E40–E46)	4.9	4.4	5.2	3.1	3.1	3.2	4.8	3.9	5.5	2.2	2.0	2.3	5.4	5.8	5.1	*	*	*	5.3	4.7	5.6
Other nutritional deficiencies . . . . (E50–E64)	0.1	0.1	0.1	0.1	*	*	*	*	*	*	*	*	0.1	*	0.1	*	*	*	0.1	0.1	0.1

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Meningitis . . . . (G00,G03)	0.2	0.2	0.1	0.1	0.2	0.1	*	*	*	0.1	0.2	*	0.3	0.4	0.2	*	*	*	0.1	0.2	0.1
Parkinson disease. . . . . (G20–G21)	9.5	14.2	6.3	6.9	9.9	5.0	4.8	6.1	3.8	6.0	8.7	4.1	5.2	8.0	3.5	*	*	*	10.7	15.8	7.0
Alzheimer disease . . . . . (G30)	28.9	23.0	32.6	27.0	21.4	30.3	15.1	11.7	17.6	16.4	13.1	18.4	26.9	23.0	28.8	20.9	12.3	26.9	30.4	24.0	34.5
Major cardiovascular diseases. . . . . (I00–I78)	223.0	272.4	182.0	163.4	201.3	132.1	191.9	225.6	161.2	126.7	154.3	104.5	301.0	377.0	244.5	245.3	274.1	215.9	226.8	276.4	185.1
Diseases of heart . . . . (I00–I09,I11,I13,I20–I51)	167.2	213.5	129.5	114.6	147.8	87.7	147.9	183.9	116.2	84.2	109.1	64.6	216.9	281.3	169.5	173.2	201.8	143.7	173.1	220.5	133.9
Acute rheumatic fever and chronic rheumatic heart diseases . . . . . (I00–I09)	1.0	0.8	1.2	0.6	0.6	0.7	1.2	*	*	0.7	0.6	0.7	0.9	0.7	1.0	*	*	*	1.1	0.9	1.3
Hypertensive heart disease . . . . (I11)	17.3	19.9	14.8	11.9	14.2	9.9	19.8	23.5	16.3	8.0	8.9	7.2	29.0	36.7	22.8	15.4	17.8	12.6	17.0	19.2	14.7
Hypertensive heart and renal disease. . . . . . (I13)	3.9	4.4	3.5	2.6	3.0	2.2	5.6	6.0	5.4	1.8	2.0	1.6	6.5	8.0	5.4	4.3	*	*	3.8	4.2	3.4
Ischemic heart diseases . . . . . (I20–I25)	87.6	121.9	60.3	66.2	90.7	46.7	76.5	102.5	54.2	50.8	70.8	35.2	104.4	144.1	75.8	94.1	115.5	72.2	90.9	126.8	61.9
Acute myocardial infarction. . . . (I21–I22)	24.5	33.3	17.2	18.4	24.3	13.5	22.3	29.4	16.2	14.5	19.8	10.2	28.5	38.2	21.5	27.1	29.3	24.2	25.8	35.3	17.7
Other acute ischemic heart diseases . . . . (I24)	1.1	1.5	0.9	0.6	0.9	0.4	1.2	1.4	*	0.5	0.7	0.4	1.8	2.6	1.3	*	*	*	1.2	1.5	0.9
Other forms of chronic ischemic heart disease . . . . . (I20,I25)	62.0	87.1	42.3	47.2	65.6	32.8	53.0	71.7	37.0	35.8	50.3	24.6	74.0	103.4	53.0	66.4	85.3	47.7	64.0	90.1	43.2
Atherosclerotic cardiovascular disease, so described . . . . (I25.0)	19.1	27.1	12.3	15.5	22.6	9.4	20.2	27.3	13.7	10.7	15.3	6.9	29.6	43.4	19.0	19.4	26.4	12.3	18.7	26.3	12.1
All other forms of chronic ischemic heart disease. . . . . . . (I20,I25.1–I25.9)	42.8	60.0	30.0	31.7	43.0	23.4	32.8	44.4	23.3	25.2	35.0	17.7	44.4	60.0	34.0	47.0	58.9	35.4	45.2	63.8	31.2
Other heart diseases . . . . . (I26–I51)	57.4	66.5	49.9	33.2	39.3	28.3	44.7	50.6	39.0	22.9	26.7	19.9	76.2	91.8	64.5	56.8	62.8	51.1	60.3	69.3	52.6
Acute and subacute endocarditis. . . . . (I33)	0.4	0.6	0.3	0.3	0.4	0.2	*	*	*	0.2	0.3	*	0.6	0.8	0.4	*	*	*	0.5	0.6	0.4

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Diseases of pericardium and acute myocarditis . . . . (I30–I31,I40)	0.3	0.4	0.3	0.3	0.2	0.2	*	*	*	0.1	0.3	*	0.5	0.5	0.5	*	*	*	0.3	0.3	0.3
Heart failure. . . . . . (I50)	21.0	24.2	18.5	12.6	15.0	11.0	14.4	16.9	12.1	8.1	9.7	7.0	26.7	32.1	22.7	17.1	19.8	14.3	22.1	25.3	19.6
All other forms of heart disease . . . . (I26–I28, I34–I38,I42–I49,I51)	35.7	41.3	30.8	20.0	23.7	16.8	29.1	32.7	25.5	14.5	16.5	12.8	48.4	58.4	40.8	38.9	42.0	36.2	37.4	43.1	32.4
Essential hypertension and hypertensive renal disease . . . . (I10,I12,I15)	10.3	11.2	9.4	9.4	10.8	8.3	9.0	9.3	8.6	8.9	9.7	8.2	19.1	22.6	16.4	11.8	13.4	10.2	9.4	9.9	8.7
Cerebrovascular diseases . . . . (I60–I69)	39.5	40.5	38.2	35.3	37.6	33.0	30.3	26.8	32.6	30.3	31.6	29.0	57.2	63.5	52.2	52.7	50.0	55.4	38.3	38.6	37.5
Atherosclerosis. . . . . . (I70)	0.9	1.1	0.8	0.7	0.9	0.6	*	*	*	0.6	0.6	0.6	1.0	1.2	0.8	*	*	*	1.0	1.1	0.8
Other diseases of circulatory system . . . . (I71–I78)	5.0	6.2	4.0	3.3	4.2	2.5	4.2	4.9	3.5	2.6	3.4	2.0	6.8	8.5	5.5	7.0	8.2	*	5.1	6.4	4.1
Aortic aneurysm and dissection . . . . (I71)	2.4	3.3	1.7	1.3	1.9	0.8	1.4	1.8	*	1.6	2.2	1.1	2.8	3.7	2.1	4.1	*	*	2.6	3.4	1.8
Other diseases of arteries, arterioles and capillaries . . . . (I72–I78)	2.6	2.9	2.3	2.0	2.3	1.7	2.7	3.0	2.5	1.0	1.2	0.9	4.0	4.7	3.4	*	*	*	2.6	2.9	2.3
Other disorders of circulatory system . . . . (I80–I99)	1.3	1.5	1.2	1.0	1.2	0.8	1.4	1.8	*	0.4	0.4	0.3	2.5	2.7	2.4	*	*	*	1.3	1.4	1.1
Influenza and pneumonia. . . . . . . (J09–J18)	11.3	13.5	9.7	9.9	11.9	8.4	15.8	17.2	14.6	8.3	10.4	6.9	13.1	16.7	10.7	10.8	9.6	11.9	11.4	13.5	9.9
Influenza. . . . . (J09–J11)	1.5	1.5	1.4	1.3	1.3	1.2	2.9	3.0	2.9	0.7	0.7	0.7	1.3	1.5	1.2	*	*	*	1.5	1.6	1.5
Pneumonia. . . . . . (J12–J18)	9.8	12.0	8.3	8.6	10.6	7.2	12.9	14.2	11.7	7.7	9.7	6.2	11.8	15.2	9.5	7.7	7.3	8.1	9.8	11.9	8.4
Other acute lower respiratory infections . . . . (J20–J22,U04)	0.1	0.1	0.1	0.1	*	*	*	*	*	*	*	*	0.1	0.1	*	*	*	*	0.1	0.1	0.1
Acute bronchitis and bronchiolitis . . . . (J20–J21)	0.0	0.1	0.0	0.0	*	*	*	*	*	*	*	*	0.1	*	*	*	*	*	0.0	0.0	0.0
Other and unspecified acute lower respiratory infections . . . . . . (J22,U04)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	0.0	0.0
Chronic lower respiratory diseases. . . . .(J40–J47)	34.3	37.0	32.3	14.3	17.3	12.3	29.2	29.3	29.1	8.5	12.2	5.8	26.7	33.3	22.7	19.8	22.4	17.7	39.6	41.6	38.3
Bronchitis, chronic and unspecified . . . . .(J40–J42)	0.1	0.1	0.1	0.0	*	*	*	*	*	*	*	*	0.1	*	0.1	*	*	*	0.1	0.1	0.1
Emphysema . . . .(J43)	1.8	2.2	1.5	0.6	0.9	0.4	1.7	2.0	1.5	0.6	1.1	0.3	1.2	1.8	0.9	*	*	*	2.2	2.5	1.9
Asthma. . . . .(J45–J46)	1.0	0.8	1.1	0.7	0.6	0.8	1.4	*	1.8	0.5	0.6	0.5	2.4	2.4	2.4	*	*	*	0.8	0.6	0.9

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | | | | |
| | | | | | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Other chronic lower respiratory diseases . . . . (J44,J47)	31.4	34.0	29.6	12.9	15.7	11.0	25.9	26.1	25.7	7.2	10.5	4.9	23.0	29.1	19.3	17.4	19.2	15.7	36.6	38.5	35.4
Pneumoconioses and chemical effects . . . . (J60–J66, J68,U07.0)	0.1	0.3	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.2	0.4	0.0
Pneumonitis due to solids and liquids . . . . . . (J69)	4.8	6.7	3.4	3.3	4.4	2.6	3.8	4.6	3.2	3.3	4.6	2.5	5.9	8.6	4.2	*	*	*	4.9	7.0	3.5
Other diseases of respiratory system . . . . (J00–J06, J30–J39,J67,J70–J98)	11.4	13.7	9.7	9.7	11.7	8.3	11.8	12.9	10.8	6.3	7.8	5.2	11.5	13.4	10.1	6.3	*	*	12.0	14.3	10.3
Peptic ulcer . . . . . . (K25–K28)	1.0	1.2	0.8	0.8	1.1	0.6	1.3	*	*	0.8	0.9	0.6	1.0	1.4	0.7	*	*	*	1.0	1.2	0.9
Diseases of appendix . . . . (K35–K38)	0.1	0.1	0.1	0.1	0.1	*	*	*	*	*	*	*	0.2	0.3	0.1	*	*	*	0.1	0.1	0.1
Hernia . . . . (K40–K46)	0.6	0.7	0.6	0.6	0.6	0.5	0.9	*	*	0.2	*	0.2	0.5	0.6	0.4	*	*	*	0.7	0.7	0.7
Chronic liver disease and cirrhosis . . . . (K70,K73–K74)	13.8	18.0	10.0	17.0	23.3	10.9	64.7	71.3	58.2	4.1	5.8	2.7	8.9	11.9	6.5	7.4	10.3	*	14.7	18.6	10.9
Alcoholic liver disease . . . . (K70)	8.1	11.2	5.2	9.1	14.7	3.9	49.9	57.6	42.7	1.8	3.0	0.9	4.9	6.8	3.4	4.2	6.6	*	8.7	11.6	6.0
Other chronic liver disease and cirrhosis . . . . . . (K73–K74)	5.7	6.8	4.8	7.8	8.6	7.0	14.7	13.7	15.6	2.3	2.8	1.8	4.0	5.1	3.1	3.2	*	*	5.9	7.0	4.9
Cholelithiasis and other disorders of gallbladder . . . . . . (K80–K82)	1.0	1.3	0.9	1.2	1.4	1.0	1.7	*	1.7	0.8	0.9	0.7	1.1	1.2	1.1	*	*	*	1.0	1.3	0.9
Nephritis, nephrotic syndrome and nephrosis . . . . (N00–N07, N17–N19,N25–N27)	13.8	16.7	11.6	12.4	14.9	10.5	17.1	19.3	15.3	9.3	11.5	7.6	26.9	32.3	23.3	20.0	21.0	19.5	12.5	15.3	10.4
Acute and rapidly progressive nephritic and nephrotic syndrome . . . . (N00–N01,N04)	0.2	0.2	0.2	0.1	0.2	0.1	*	*	*	0.1	*	*	0.3	0.4	0.3	*	*	*	0.2	0.2	0.1
Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified . . . . (N02–N03, N05–N07,N26)	0.1	0.1	0.1	0.0	*	*	*	*	*	0.1	*	*	0.1	*	0.1	*	*	*	0.1	0.1	0.1
Renal failure . . . . (N17–N19)	13.5	16.4	11.4	12.2	14.7	10.3	16.7	18.8	15.0	9.0	11.1	7.5	26.5	31.8	22.9	19.5	20.5	18.9	12.2	15.0	10.2

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

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Cause of death (based on ICD–10)	Total[1]			Hispanic[2]			Non-Hispanic, single race[3] American Indian and Alaska Native			Asian			Black			Native Hawaiian or Other Pacific Islander			White		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Other disorders of kidney . . . . (N25,N27)	0.0	0.0	0.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.0	*	*
Infections of kidney . . . . (N10–N12,N13.6,N15.1)	0.3	0.2	0.3	0.3	0.2	0.4	*	*	*	0.1	*	*	0.3	0.3	0.3	*	*	*	0.3	0.2	0.3
Hyperplasia of prostate . . . . (N40)	0.2	0.5	…	0.2	0.5	…	*	*	…	0.1	0.3	…	0.2	0.5	…	*	*	…	0.2	0.5	…
Inflammatory diseases of female pelvic organs . . . . (N70–N76)	0.0	…	0.1	0.1	…	0.1	*	…	*	*	…	*	0.1	…	0.2	*	…	*	0.0	…	0.1
Pregnancy, childbirth and the puerperium . . . . . (O00–O99)	0.4	…	0.9	0.3	…	0.7	1.1	…	2.2	0.2	…	0.4	1.0	…	1.9	*	…	*	0.3	…	0.7
Pregnancy with abortive outcome . . . . . . (O00–O07)	0.0	…	0.0	*	…	*	*	…	*	*	…	*	*	…	*	*	…	*	*	…	*
Other complications of pregnancy, childbirth and the puerperium . . . . (O10–O99)	0.4	…	0.8	0.3	…	0.7	1.0	…	2.0	0.2	…	0.4	0.9	…	1.8	*	…	*	0.3	…	0.7
Certain conditions originating in the perinatal period. . . . . (P00–P96)	3.8	4.2	3.4	3.3	3.7	3.0	4.5	5.1	3.8	2.5	2.7	2.2	7.5	8.5	6.6	7.0	7.2	*	3.1	3.3	2.8
Congenital malformations, deformations and chromosomal abnormalities . . . . (Q00–Q99)	3.2	3.3	3.1	2.8	2.8	2.7	4.0	4.0	3.9	1.5	1.6	1.3	3.8	4.0	3.6	3.9	*	*	3.4	3.5	3.2
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	8.9	10.0	7.7	5.7	7.1	4.3	13.2	17.6	9.2	3.7	4.2	3.2	13.1	15.8	10.8	8.5	9.4	7.7	8.9	9.7	7.9
All other diseases. . . . (residual)	99.7	102.0	96.0	68.4	70.5	65.1	117.4	118.4	113.8	43.2	43.7	42.1	115.9	125.9	107.7	77.6	78.6	76.2	105.8	107.5	102.6
Accidents (unintentional injuries) . . . . (V01–X59, Y85–Y86)	64.0	89.5	39.4	48.9	73.7	23.7	131.2	174.8	88.3	19.0	27.4	11.6	80.7	123.2	43.7	49.4	71.0	27.6	67.9	91.7	44.5
Transport accidents . . . . (V01–V99,Y85)	14.2	20.9	7.6	14.2	21.1	7.1	36.5	49.3	23.8	4.9	6.9	3.1	19.1	29.3	10.0	14.7	21.5	7.5	13.8	20.1	7.6

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | |
| | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
Cause of death (based on ICD–10)	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
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)	13.3	19.5	7.3	13.4	19.9	6.8	34.5	46.6	22.5	4.6	6.3	3.0	18.2	27.7	9.6	13.6	20.2	6.5	12.9	18.6	7.2
Other land transport accidents. . . . . (V01, V05–V06,V09.1, V09.3–V09.9, V10–V11,V15–V18, V19.3,V19.8–V19.9, V80.0–V80.2, V80.6–V80.9, V81.2–V81.9, V82.2–V82.9, V87.9, V88.9, V89.1,V89.3,V89.9)	0.3	0.6	0.1	0.4	0.7	0.1	0.9	*	*	0.2	0.3	*	0.4	0.7	0.1	*	*	*	0.3	0.5	0.1
Water, air and space, and other and unspecified transport accidents and their sequelae . . . .(V90–V99,Y85)	0.6	0.9	0.2	0.4	0.5	0.2	1.0	*	*	0.2	0.3	*	0.5	0.9	0.2	*	*	*	0.6	1.0	0.3
Nontransport accidents . . . . (W00–X59,Y86)	49.8	68.6	31.7	34.7	52.6	16.6	94.7	125.5	64.6	14.1	20.5	8.6	61.6	93.9	33.8	34.7	49.5	20.1	54.1	71.6	36.9
Falls . . . . (W00–W19)	11.2	13.8	9.2	6.9	9.2	5.0	10.2	12.6	8.0	6.4	8.4	4.9	5.6	8.0	3.9	8.5	11.4	*	12.7	15.2	10.7
Accidental discharge of firearms . . . .(W32–W34)	0.2	0.3	0.0	0.1	0.1	*	*	*	*	*	*	*	0.3	0.5	*	*	*	*	0.1	0.2	0.0
Accidental drowning and submersion . . . . (W65–W74)	1.2	1.8	0.6	1.1	1.8	0.4	2.5	3.3	1.8	0.8	1.3	0.4	1.5	2.5	0.7	*	*	*	1.2	1.7	0.7

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	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 exposure to smoke, fire and flames . . . . . . (X00–X09)	0.9	1.1	0.7	0.5	0.6	0.3	1.5	2.0	*	0.3	0.3	0.2	1.6	2.1	1.2	*	*	*	0.9	1.2	0.8
Accidental poisoning and exposure to noxious substances . . . . (X40–X49)	31.1	44.5	17.6	22.7	35.9	8.9	70.3	92.9	47.8	4.6	7.8	1.6	45.8	71.2	23.0	17.6	27.5	7.4	33.6	45.9	20.9
Other and unspecified nontransport accidents and their sequelae . . . . (W20–W31, W35–W64,W75–W99, X10–X39,X50–X59,Y86)	5.2	7.1	3.6	3.4	5.0	2.0	9.7	13.7	5.8	2.0	2.7	1.4	6.9	9.6	4.9	5.7	*	*	5.5	7.4	3.7
Intentional self-harm (suicide) . . . . . (*U03,X60–X84,Y87.0)	14.2	23.0	5.9	8.1	13.0	3.1	27.1	39.6	14.6	6.9	10.1	3.9	8.9	14.9	3.5	14.3	22.1	6.1	17.6	28.1	7.3
Intentional self-harm (suicide) by discharge of firearms . . . . . . (X72–X74)	7.6	13.5	2.0	3.3	5.9	0.7	10.5	18.4	2.7	1.7	3.2	0.4	5.2	9.4	1.4	3.7	6.1	*	9.7	17.1	2.7
Intentional self-harm (suicide) by other and unspecified means and their sequelae . . . . . (*U03, X60–X71,X75–X84,Y87.0)	6.7	9.4	3.9	4.8	7.2	2.4	16.6	21.2	11.9	5.1	6.9	3.5	3.7	5.5	2.1	10.6	16.0	*	7.8	11.0	4.6
Assault (homicide) . . . . (*U01–*U02,X85–Y09,Y87.1)	7.7	12.4	3.0	6.8	10.9	2.5	16.5	25.7	7.2	1.5	2.0	1.0	31.0	53.9	8.7	7.9	12.9	*	3.1	4.3	1.9
Assault (homicide) by discharge of firearms . . . . (*U01.4,X93–X95)	6.2	10.2	2.0	5.2	8.6	1.6	9.6	15.6	3.5	0.9	1.3	0.5	27.0	47.9	6.7	5.5	9.9	*	2.1	3.0	1.2
Assault (homicide) by other and unspecified means and their sequelae . . . . (*U01.0–*U01.3, *U01.5–*U01.9,*U02, X85–X92,X96–Y09,Y87.1)	1.6	2.1	1.0	1.6	2.3	0.9	6.9	10.1	3.7	0.5	0.6	0.5	4.0	6.0	2.0	*	*	*	1.1	1.4	0.8
Legal intervention . . . . (Y35,Y89.0)	0.3	0.5	0.0	0.3	0.6	*	1.3	2.7	*	*	*	*	0.5	0.9	*	*	*	*	0.2	0.4	0.0
Events of undetermined intent . . . . . (Y10–Y34,Y87.2,Y89.9)	1.7	2.2	1.2	0.9	1.3	0.5	4.3	5.9	2.7	0.5	0.7	0.3	3.1	4.5	1.9	*	*	*	1.7	2.2	1.3

See footnotes at end of table.

Table 11. Age-adjusted death rate for 113 selected causes, Enterocolitis due to *Clostridium difficile*, COVID-19, dementia-related causes, drug-induced causes, alcohol-induced causes, and firearm-related injuries, by Hispanic origin and race and sex: United States, 2022—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for some Hispanic-origin and race categories should be interpreted with caution because of inconsistencies in reporting these items on death certificates and surveys; see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | | | | | | | | Non-Hispanic, single race[3] | | | | | | | | | | | | | |
| Cause of death (based on ICD–10) | Total[1] | | | Hispanic[2] | | | American Indian and Alaska Native | | | Asian | | | Black | | | Native Hawaiian or Other Pacific Islander | | | White | | |
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Discharge of firearms, undetermined intent . . . . (Y22–Y24)	0.1	0.2	0.1	0.1	0.2	*	*	*	*	*	*	*	0.3	0.5	0.1	*	*	*	0.1	0.2	0.1
Other and unspecified events of undetermined intent and their sequelae . . . . (Y10–Y21,Y25–Y34, Y87.2,Y89.9)	1.5	2.0	1.1	0.8	1.2	0.5	3.9	5.4	2.5	0.5	0.7	0.3	2.8	4.0	1.8	*	*	*	1.6	2.0	1.2
Operations of war and their sequelae . . . . (Y36,Y89.1)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Complications of medical and surgical care . . . .(Y40–Y84,Y88)	0.9	1.0	0.8	0.7	0.8	0.6	1.2	*	*	0.4	0.5	0.3	1.4	1.5	1.4	*	*	*	0.9	1.0	0.8
Enterocolitis due to *Clostridium difficile* . . . . (A04.7)[4]	1.0	1.0	1.0	0.8	0.9	0.8	1.2	*	1.7	0.5	0.5	0.5	1.1	1.3	0.9	*	*	*	1.0	1.0	1.1
COVID-19 . . . . (U07.1)[4]	44.5	56.7	35.4	47.2	62.8	35.6	65.9	73.1	60.1	25.3	34.5	18.6	53.9	66.5	46.2	48.9	58.7	41.2	43.9	55.9	34.8
Dementia-related causes[4]	70.4	59.7	76.8	54.3	45.7	59.2	39.8	31.5	45.5	36.1	30.0	39.8	67.8	62.5	69.9	42.5	31.9	50.2	75.2	63.4	82.6
Drug-induced deaths[4]	33.8	47.2	20.2	23.4	36.3	9.9	69.5	88.8	50.3	5.5	8.7	2.5	49.2	75.7	25.3	20.7	30.9	10.2	36.9	49.2	24.2
Drug overdose deaths[4]	32.6	45.6	19.4	22.7	35.2	9.5	65.2	83.4	47.1	5.3	8.4	2.4	47.5	73.3	24.5	18.8	28.3	8.9	35.6	47.6	23.3
Alcohol-induced deaths[4]	13.5	19.5	7.8	13.2	21.5	5.1	78.4	98.4	59.4	2.9	5.1	1.1	9.7	14.5	5.7	7.1	11.2	*	14.8	20.5	9.1
Firearm-related injuries[4]	14.2	24.6	4.1	8.9	15.2	2.4	22.2	37.7	6.7	2.7	4.6	1.0	33.2	59.0	8.3	9.8	17.1	*	12.2	20.7	3.9

0.0 Quantity more than zero but less than 0.05.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

. . . Category not applicable.

[1]Includes deaths with origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.

[2]Includes people of Hispanic origin of any race; see Technical Notes.

[3]Only one race was reported on the death certificate; see Technical Notes.

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

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 12. Number of deaths, death rate, and age-adjusted death rate for injury deaths, by mechanism and intent of death: United States, 2022

[Totals for selected causes of death differ from those shown in other tables that use standard mortality tabulation lists; see Technical Notes in this report. 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 2020 census estimated as of July 1, 2022; see Technical Notes. Numbers in brackets [ ] apply to the code or range of codes preceding them. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th 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)	307,785	92.3	87.9
Unintentional...(V01–X59,Y85–Y86)	227,039	68.1	64.0
Suicide ....(*U03,X60–X84,Y87.0)	49,476	14.8	14.2
Homicide...(*U01–*U02,X85–Y09,Y87.1)	24,849	7.5	7.7
Undetermined ....(Y10–Y34,Y87.2,Y89.9)	5,604	1.7	1.7
Legal intervention/war.......................................(Y35–Y36,Y89[.0,.1])	817	0.2	0.3
Cut/pierce.............................(W25–W29,W45–W46,X78,X99,Y28,Y35.4)	3,011	0.9	0.9
Unintentional...(W25–W29,W45–W46)	201	0.1	0.0
Suicide ....(X78)	970	0.3	0.3
Homicide...(X99)	1,800	0.5	0.5
Undetermined ....(Y28)	40	0.0	0.0
Legal intervention/war...(Y35.4)	–	*	*
Drowning ....(W65–W74,X71,X92,Y21)	5,043	1.5	1.5
Unintentional...(W65–W74)	4,168	1.3	1.2
Suicide ....(X71)	502	0.2	0.1
Homicide...(X92)	39	0.0	0.0
Undetermined ....(Y21)	334	0.1	0.1
Fall ....(W00–W19,X80,Y01,Y30)	47,984	14.4	11.6
Unintentional...(W00–W19)	46,630	14.0	11.2
Suicide ....(X80)	1,245	0.4	0.4
Homicide...(Y01)	10	*	*
Undetermined ....(Y30)	99	0.0	0.0
Fire/hot object or substance.......... (*U01.3,X00–X19,X76–X77,X97–X98,Y26–Y27,Y36.3)[2]	4,096	1.2	1.1
Unintentional...(X00–X19)	3,571	1.1	0.9
Suicide ....(X76–X77)	193	0.1	0.1
Homicide...(*U01.3,X97–X98)	96	0.0	0.0
Undetermined ....(Y26–Y27)	236	0.1	0.1
Legal intervention/war...(Y36.3)	–	*	*
Fire/flame ....(X00–X09,X76,X97,Y26)	3,999	1.2	1.0
Unintentional...(X00–X09)	3,478	1.0	0.9
Suicide ....(X76)	193	0.1	0.1
Homicide...(X97)	93	0.0	0.0
Undetermined ....(Y26)	235	0.1	0.1
Hot object/substance ....(X10–X19,X77,X98,Y27)	97	0.0	0.0
Unintentional...(X10–X19)	93	0.0	0.0
Suicide ....(X77)	–	*	*
Homicide...(X98)	3	*	*
Undetermined ....(Y27)	1	*	*
Firearm.........................(*U01.4,W32–W34,X72–X74,X93–X95,Y22–Y24,Y35.0)	48,204	14.5	14.2
Unintentional...(W32–W34)	463	0.1	0.2
Suicide ....(X72–X74)	27,032	8.1	7.6
Homicide...(*U01.4,X93–X95)	19,651	5.9	6.2
Undetermined ....(Y22–Y24)	415	0.1	0.1
Legal intervention/war...(Y35.0)	643	0.2	0.2
Machinery....................................(W24,W30–W31)[3]	645	0.2	0.2
All transport ....(*U01.1,V01–V99,X82,Y03,Y32,Y36.1)	48,332	14.5	14.0
Unintentional...(V01–V99)	48,043	14.4	13.9
Suicide ....(X82)	169	0.1	0.0
Homicide...(*U01.1,Y03)	101	0.0	0.0
Undetermined ....(Y32)	19	*	*
Legal intervention/war...(Y36.1)	–	*	*
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)[3]	44,534	13.4	12.9
Occupant.................................(V30–V79[.4–.9],V83–V86[.0–.3])[3]	9,457	2.8	2.7
Motorcyclist.............................(V20–V28[.3–.9],V29[.4–.9])[3]	5,905	1.8	1.7
Pedal cyclist ....(V12–V14[.3–.9],V19[.4–.6])[3]	928	0.3	0.2
Pedestrian.............................(V02–V04[.1,.9],V09.2)[3]	8,233	2.5	2.4
Other ....(V80[.3–.5],V81.1,V82.1)[3]	9	*	*
Unspecified ....(V87[.0–.8],V89.2)[3]	20,002	6.0	5.8

See footnotes at end of table.

Table 12. Number of deaths, death rate, and age-adjusted death rate for injury deaths, by mechanism and intent of death: United States, 2022—Con.

[Totals for selected causes of death differ from those shown in other tables that use standard mortality tabulation lists; see Technical Notes in this report. 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 2020 census estimated as of July 1, 2022; see Technical Notes. Numbers in brackets [ ] apply to the code or range of codes preceding them. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

Mechanism and intent of death (based on ICD–10)	Number	Rate	Age-adjusted rate[1]
Pedal cyclist, other . . . . (V10–V11,V12–V14[.0–.2],V15–V18,V19[.0–.3,.8,.9])[3]	432	0.1	0.1
Pedestrian, other . . . .(V01,V02–V04[.0],V05,V06,V09[.0,.1,.3,.9])[3]	955	0.3	0.3
Other land transport . . . . . (V20–V28[.0–.2],V29–V79[.0–.3],V80[.0–.2,.6–.9],V81–V82[.0,.2–.9], V83–V86[.4–.9],V87.9,V88[.0–.9], V89[.0,.1,.3,.9],X82,Y03,Y32)	1,590	0.5	0.5
Unintentional. . . . . (V20–V28[.0–.2],V29–V79[.0–.3],V80[.0–.2,.6–.9],V81–V82[.0,.2–.9], V83–V86[.4–.9],V87.9,V88[.0–.9],V89[.0,.1,.3,.9])	1,301	0.4	0.4
Suicide . . . .(X82)	169	0.1	0.0
Homicide. . . . .(Y03)	101	0.0	0.0
Undetermined . . . .(Y32)	19	*	*
Other transport. . . . . (*U01.1,V90–V99,Y36.1)	821	0.2	0.2
Unintentional. . . . . (V90–V99)	821	0.2	0.2
Homicide. . . . . (*U01.1)	–	*	*
Legal intervention/war . . . . (Y36.1)	–	*	*
Natural/environmental . . . . (W42–W43,W53–W64,W92–W99,X20–X39,X51–X57)[3]	3,140	0.9	0.8
Overexertion. . . . . (X50)[3]	28	0.0	0.0
Poisoning . . . . (*U01[.6–.7],X40–X49,X60–X69,X85–X90,Y10–Y19,Y35.2)	112,728	33.8	33.9
Unintentional. . . . . (X40–X49)	102,958	30.9	31.1
Suicide . . . . (X60–X69)	6,150	1.8	1.7
Homicide. . . . . (*U01[.6–.7],X85–X90)	214	0.1	0.1
Undetermined . . . . (Y10–Y19)	3,406	1.0	1.0
Legal intervention/war . . . . (Y35.2)	–	*	*
Struck by or against . . . . (W20–W22,W50–W52,X79,Y00,Y04,Y29,Y35.3)	1,184	0.4	0.3
Unintentional. . . . .(W20–W22,W50–W52)	936	0.3	0.3
Suicide . . . .(X79)	3	*	*
Homicide. . . . .(Y00,Y04)	243	0.1	0.1
Undetermined . . . .(Y29)	2	*	*
Legal intervention/war . . . . (Y35.3)	–	*	*
Suffocation. . . . .(W75–W84,X70,X91,Y20)	20,197	6.1	5.9
Unintentional. . . . . (W75–W84)	7,416	2.2	2.0
Suicide . . . .(X70)	12,247	3.7	3.7
Homicide. . . . .(X91)	375	0.1	0.1
Undetermined . . . .(Y20)	159	0.0	0.0
Other specified, classifiable . . . . . (*U01[.0,.2,.5],*U03.0,W23,W35–W41,W44, W49,W85–W91, X75,X81,X96,Y02,Y05–Y07,Y25,Y31,Y35[.1,.5],Y36[.0,.2,.4–.8],Y85)	2,810	0.8	0.8
Unintentional. . . . . (W23,W35–W41,W44,W49,W85–W91,Y85)	1,859	0.6	0.5
Suicide . . . .(*U03.0,X75,X81)	708	0.2	0.2
Homicide. . . . .(*U01[.0,.2,.5],X96,Y02,Y05–Y07)	187	0.1	0.0
Undetermined . . . .(Y25,Y31)	37	0.0	0.0
Legal intervention/war . . . . (Y35[.1,.5],Y36[.0,.2,.4–.8])	19	*	*
Other specified, not elsewhere classified . . . . (*U01.8,*U02,X58,X83,Y08,Y33, Y35.6,Y86–Y87,Y89[.0–.1])	2,906	0.9	0.8
Unintentional. . . . . (X58,Y86)	1,708	0.5	0.4
Suicide . . . . (X83,Y87.0)	155	0.0	0.1
Homicide. . . . .(*U01.8,*U02,Y08,Y87.1)	630	0.2	0.2
Undetermined . . . . (Y33,Y87.2)	260	0.1	0.1
Legal intervention/war . . . .(Y35.6,Y89[.0,.1])	153	0.0	0.1
Unspecified. . . . . (*U01.9,*U03.9,X59,X84,Y09,Y34,Y35.7,Y36.9,Y89.9)	7,477	2.2	1.9
Unintentional. . . . .(X59)	5,273	1.6	1.3
Suicide . . . .(*U03.9,X84)	102	0.0	0.0
Homicide. . . . .(*U01.9,Y09)	1,503	0.5	0.5
Undetermined . . . . (Y34,Y89.9)	597	0.2	0.2
Legal intervention/war . . . . (Y35.7,Y36.9)	2	*	*

0.0 Quantity more than zero but less than 0.05.
– Quantity zero.
* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
[1]For method of computation, see Technical Notes.
[2]Codes U01.3 and Y36.3 cannot be divided separately into the subcategories shown below; therefore, subcategories may not add to the total.
[3]Intent of death is unintentional.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 13. Number of deaths, death rate, and age-adjusted death rate for age 15 and older, by marital status and sex: United States, 2022

[Rates are per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Population estimates used for computing death rates are based on the 2022 1-year American Community Survey adjusted to postcensal July 1, 2022, resident population control totals for the United States; see Technical Notes]

Marital status and sex	15 and older[1]	15–24	25–34	35–44	45–54	55–64	65–74	75 and older	Age-adjusted rate[2]
					Number				
Both sexes	3,248,806	35,232	74,369	111,605	183,284	417,541	668,581	1,758,194	…
Never married.	474,143	34,102	58,093	57,886	58,785	96,537	86,274	82,466	…
Ever married.	2,745,678	1,066	15,801	52,299	121,648	313,397	573,038	1,668,429	…
Married	1,170,668	914	11,278	32,158	69,139	164,948	301,398	590,833	…
Widowed.	998,284	23	323	1,526	5,935	31,929	104,198	854,350	…
Divorced	576,726	129	4,200	18,615	46,574	116,520	167,442	223,246	…
Not stated.	28,985	64	475	1,420	2,851	7,607	9,269	7,299	…
Male.	1,701,852	25,637	52,511	73,486	114,847	254,278	384,985	796,108	…
Never married.	305,100	24,937	42,236	40,876	40,100	65,358	53,632	37,961	…
Ever married.	1,376,213	653	9,957	31,638	72,725	183,202	324,503	753,535	…
Married	781,922	567	7,197	19,484	41,611	99,787	192,561	420,715	…
Widowed.	290,488	10	141	628	2,362	12,026	36,209	239,112	…
Divorced	303,803	76	2,619	11,526	28,752	71,389	95,733	93,708	…
Not stated.	20,539	47	318	972	2,022	5,718	6,850	4,612	…
Female	1,546,954	9,595	21,858	38,119	68,437	163,263	283,596	962,086	…
Never married.	169,043	9,165	15,857	17,010	18,685	31,179	32,642	44,505	…
Ever married.	1,369,465	413	5,844	20,661	48,923	130,195	248,535	914,894	…
Married	388,746	347	4,081	12,674	27,528	65,161	108,837	170,118	…
Widowed.	707,796	13	182	898	3,573	19,903	67,989	615,238	…
Divorced	272,923	53	1,581	7,089	17,822	45,131	71,709	129,538	…
Not stated.	8,446	17	157	448	829	1,889	2,419	2,687	…
					Rate[3]				
Both sexes	1,186.0	79.7	164.4	253.4	452.8	991.1	1,972.3	7,349.0	1,213.6
Never married.	504.0	81.7	227.9	496.6	925.3	1,924.9	3,216.9	7,176.4	1,623.5
Ever married.	1,526.6	42.7	80.0	161.5	356.5	844.5	1,835.7	7,325.7	1,116.8
Married	860.3	38.5	62.6	115.6	254.2	599.7	1,405.2	5,044.2	790.4
Widowed.	6,610.6	*	384.9	578.8	875.9	1,607.2	2,592.1	10,606.6	1,880.3
Divorced	2,010.9	116.7	255.2	432.4	746.0	1,529.2	2,912.9	7,423.9	1,514.4
Male.	1,262.2	113.2	228.0	330.1	565.7	1,231.0	2,413.9	7,980.4	1,406.1
Never married.	608.2	115.4	300.4	627.3	1,157.1	2,392.0	4,026.3	8,438.6	1,983.4
Ever married.	1,625.5	62.2	111.0	200.9	432.0	1,022.1	2,220.1	7,910.3	1,266.7
Married	1,132.8	56.8	87.2	141.3	300.0	711.1	1,704.5	6,197.4	964.7
Widowed.	8,310.0	*	590.5	790.5	1,247.4	2,298.6	3,784.8	13,929.2	2,579.3
Divorced	2,502.2	169.9	377.4	615.1	1,035.3	2,119.5	4,051.7	9,179.9	2,006.1
Female	1,112.0	44.5	98.4	175.0	339.2	760.4	1,580.0	6,897.5	1,043.0
Never married.	384.9	45.5	138.8	330.9	647.1	1,365.7	2,418.2	6,364.4	1,272.4
Ever married.	1,438.6	28.5	54.2	124.1	283.0	678.5	1,497.3	6,905.3	990.5
Married	579.8	25.3	41.8	90.3	206.5	483.6	1,072.2	3,454.5	571.7
Widowed.	6,098.7	*	303.1	487.5	731.8	1,360.0	2,219.6	9,706.7	1,654.8
Divorced	1,650.2	80.5	166.1	291.6	514.1	1,061.5	2,118.1	6,521.4	1,183.5

… Category not applicable.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

[1]Excludes data for age not stated.

[2]Calculated based on age 25 and older. For method of computation, see Technical Notes.

[3]Data for marital status not stated are included in totals for both sexes, male, and female but are not distributed among specified marital status groups.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 14. Number of deaths, death rate, and age-adjusted death rate for ages 25–64, by educational attainment and sex: United States, 2022

[Rates are per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Population estimates used for computing death rates are based on the 2022 1-year American Community Survey adjusted to postcensal July 1, 2022, resident population control totals for the United States; see Technical Notes]

Education level and sex	Age group					Age-adjusted rate[2]
	25–64[1]	25–34	35–44	45–54	55–64	
	Number					
Both sexes	786,799	74,369	111,605	183,284	417,541	…
Less than high school diploma or GED	137,271	13,575	20,478	31,644	71,574	…
High school diploma or GED	358,700	36,679	50,390	80,137	191,494	…
Some college or collegiate degree	271,100	23,155	38,616	67,101	142,228	…
Not stated[3]	19,728	960	2,121	4,402	12,245	…
Male	495,122	52,511	73,486	114,847	254,278	…
Less than high school diploma or GED	92,902	10,052	14,481	21,380	46,989	…
High school diploma or GED	235,132	26,933	34,884	52,868	120,447	…
Some college or collegiate degree	152,863	14,826	22,634	37,459	77,944	…
Not stated[3]	14,225	700	1,487	3,140	8,898	…
Female	291,677	21,858	38,119	68,437	163,263	…
Less than high school diploma or GED	44,369	3,523	5,997	10,264	24,585	…
High school diploma or GED	123,568	9,746	15,506	27,269	71,047	…
Some college or collegiate degree	118,237	8,329	15,982	29,642	64,284	…
Not stated[3]	5,503	260	634	1,262	3,347	…
	Rate					
Both sexes[3]	457.7	164.4	253.4	452.8	991.1	405.6
Less than high school diploma or GED	818.6	412.9	472.4	705.3	1,536.3	695.7
High school diploma or GED	839.6	334.3	510.7	820.2	1,580.9	724.4
Some college or collegiate degree	241.2	74.8	129.4	255.9	560.9	220.3
Male[3]	574.1	228.0	330.1	565.7	1,231.0	515.6
Less than high school diploma or GED	987.3	515.3	584.1	859.6	1,885.3	855.8
High school diploma or GED	987.0	420.1	612.4	976.2	1,911.9	874.5
Some college or collegiate degree	288.3	101.1	160.7	302.1	657.0	265.0
Female[3]	340.6	98.4	175.0	339.2	760.4	295.8
Less than high school diploma or GED	603.0	263.5	323.2	513.4	1,134.8	493.0
High school diploma or GED	653.8	213.7	371.8	626.1	1,222.2	539.1
Some college or collegiate degree	199.1	51.1	101.4	214.5	476.5	180.5

… Category not applicable.

[1]Excludes data for age not stated.

[2]Calculated based on ages 25–64. For method of computation, see Technical Notes.

[3]Includes deaths with education not stated.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 15. Number of deaths and death rate by age and age-adjusted death rate for injury at work for age 15 and older, by Hispanic origin and race and sex: United States, 2022

[Rates are per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys, although misclassification is very minor; see Technical Notes. For a discussion of injury at work, see Technical Notes]

Hispanic origin and race and sex	Age group							Age-adjusted rate[2]
	15 and older[1]	15–24	25–34	35–44	45–54	55–64	65 and older	
	Number							
Total[3], both sexes.	4,987	391	821	943	1,011	1,057	764	…
Male	4,517	342	742	861	925	976	671	…
Female	470	49	79	82	86	81	93	…
Hispanic[4]	1,075	140	215	256	228	181	55	…
Male	1,015	122	211	242	217	173	50	…
Female	60	18	4	14	11	8	5	…
Non-Hispanic, single race[5]:								…
Black, both sexes	657	54	120	128	155	124	76	…
Male	583	48	102	114	137	115	67	…
Female.	74	6	18	14	18	9	9	…
White, both sexes	3,022	180	429	522	591	701	599	…
Male	2,709	158	378	472	536	640	525	…
Female.	313	22	51	50	55	61	74	…
	Rate							
Total[3], both sexes.	1.8	0.9	1.8	2.2	2.5	2.5	1.3	1.8
Male	3.3	1.5	3.2	3.9	4.6	4.7	2.6	3.4
Female	0.3	0.2	0.4	0.4	0.4	0.4	0.3	0.3
Hispanic[4]	2.2	1.3	2.2	2.8	3.0	3.2	1.0	2.2
Male	4.2	2.2	4.2	5.1	5.5	6.1	2.1	4.1
Female	0.3	*	*	*	*	*	*	0.2
Non-Hispanic, single race[5]:								
Black, both sexes	1.9	0.9	1.8	2.3	3.1	2.5	1.4	2.0
Male	3.6	1.6	3.1	4.2	5.7	5.0	3.0	3.7
Female.	0.4	*	*	*	*	*	*	0.4
White, both sexes	1.8	0.8	1.8	2.1	2.5	2.5	1.4	1.8
Male	3.3	1.3	3.0	3.8	4.4	4.5	2.7	3.2
Female.	0.4	0.2	0.4	0.4	0.5	0.4	0.3	0.4

… Category not applicable.
* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
[1]Excludes figures for age not stated.
[2]Calculated based on age 15 and older. For method of computation, see Technical Notes.
[3]Includes race and origin groups not shown separately; see Technical Notes.
[4]Includes persons of Hispanic origin of any race; see Technical Notes.
[5]Only one race was reported on the death certificate.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 16. Number of deaths, death rate, and age-adjusted death rate for injury at work for age 15 and older, by Hispanic origin and race and sex: United States, 1997–2022

[Excludes data for age not stated. Data for specified race and Hispanic-origin groups other than non-Hispanic White and non-Hispanic Black should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys, although misclassification is very minor; see Technical Notes in this report. For a discussion of injury at work, see Technical Notes]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022.	4,987	4,517	470	1.8	3.3	0.3	1.8	3.4	0.3
2021.	4,840	4,389	451	1.8	3.3	0.3	1.8	3.3	0.3
2020.	4,321	3,921	400	1.6	3.0	0.3	1.6	3.0	0.3
2019.	4,743	4,321	422	1.8	3.3	0.3	1.8	3.3	0.3
2018.	4,560	4,179	381	1.7	3.2	0.3	1.7	3.2	0.3
2017.	4,573	4,143	430	1.7	3.2	0.3	1.7	3.1	0.3
2016.	4,621	4,169	452	1.8	3.3	0.3	1.7	3.2	0.3
2015[4]	4,185	3,816	369	1.6	3.0	0.3	1.6	3.0	0.3
2014.	4,348	3,916	432	1.7	3.1	0.3	1.7	3.1	0.3
2013.	4,268	3,882	386	1.7	3.1	0.3	1.7	3.1	0.3
2012.	4,106	3,743	363	1.6	3.0	0.3	1.6	3.0	0.3
2011.	4,097	3,736	361	1.6	3.1	0.3	1.6	3.0	0.3
2010.	4,157	3,829	328	1.7	3.2	0.3	1.7	3.1	0.3
2009.	3,919	3,601	318	1.6	3.0	0.3	1.6	3.0	0.3
2008.	4,690	4,317	373	1.9	3.6	0.3	1.9	3.6	0.3
2007.	5,025	4,606	419	2.1	3.9	0.3	2.1	3.9	0.3
2006.	5,298	4,869	429	2.2	4.2	0.4	2.2	4.2	0.3
2005.	5,113	4,670	443	2.2	4.1	0.4	2.2	4.1	0.4
2004.	5,157	4,729	428	2.2	4.2	0.4	2.2	4.2	0.4
2003.	5,025	4,609	416	2.2	4.1	0.4	2.2	4.1	0.3
2002.	5,305	4,859	446	2.3	4.4	0.4	2.4	4.4	0.4
2001[5]	8,303	7,181	1,122	3.7	6.6	1.0	3.7	6.6	1.0
2000.	5,430	4,969	461	2.5	4.6	0.4	2.5	4.6	0.4
1999.	5,651	5,152	499	2.6	4.9	0.4	2.6	4.9	0.4
1998.	5,543	5,036	507	2.6	4.8	0.5	2.6	4.8	0.5
1997.	5,666	5,144	522	2.7	5.0	0.5	2.6	5.0	0.5
Hispanic[6]									
2022.	1,075	1,015	60	2.2	4.2	0.3	2.2	4.1	0.2
2021.	1,041	996	45	2.2	4.2	0.2	2.2	4.2	0.2
2020.	950	903	47	2.1	3.9	0.2	2.1	4.0	0.2
2019.	959	907	52	2.1	4.0	0.2	2.2	4.1	0.2
2018.	827	786	41	1.9	3.5	0.2	1.9	3.6	0.2
2017.	796	755	41	1.8	3.5	0.2	1.9	3.6	0.2
2016.	795	753	42	1.9	3.6	0.2	1.9	3.7	0.2
2015[4]	771	738	33	1.9	3.5	0.2	1.9	3.7	0.2
2014.	718	681	37	1.8	3.4	0.2	1.9	3.6	0.2
2013.	735	698	37	1.9	3.5	0.2	1.9	3.7	0.2
2012.	682	649	33	1.8	3.4	0.2	1.8	3.5	0.2
2011.	630	590	40	1.7	3.1	0.2	1.7	3.2	0.2
2010.	604	572	32	1.7	3.1	0.2	1.7	3.3	0.2
2009.	619	583	36	1.8	3.3	0.2	1.8	3.5	0.2
2008.	680	643	37	2.0	3.7	0.2	2.0	3.8	0.2
2007.	794	761	33	2.4	4.6	0.2	2.4	4.5	0.2
2006.	856	820	36	2.7	5.1	0.2	2.7	5.1	0.2
2005.	761	718	43	2.5	4.6	0.3	2.5	4.6	0.3
2004.	735	702	33	2.5	4.7	0.2	2.5	4.7	0.2
2003.	671	635	36	2.4	4.4	0.3	2.3	4.4	0.2
2002.	757	710	47	2.8	5.1	0.4	2.8	5.2	0.4
2001[5]	1,049	916	133	4.0	6.8	1.0	4.1	7.1	1.0
2000.	718	684	34	2.9	5.3	0.3	2.8	5.4	0.3
1999.	597	566	31	2.5	4.6	0.3	2.5	4.8	0.3
1998.	610	584	26	2.7	5.0	0.2	2.7	5.1	0.2
1997.	571	531	40	2.6	4.8	0.4	2.7	5.0	0.4

See footnotes at end of table.

Table 16. Number of deaths, death rate, and age-adjusted death rate for injury at work for age 15 and older, by Hispanic origin and race and sex: United States, 1997–2022—Con.

[Excludes data for age not stated. Data for specified race and Hispanic-origin groups other than non-Hispanic White and non-Hispanic Black should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys, although misclassification is very minor; see Technical Notes in this report. For a discussion of injury at work, see Technical Notes]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[7]									
American Indian and Alaska Native:									
2022	37	29	8	1.9	3.0	*	1.9	3.0	*
2021	37	31	6	1.9	3.2	*	1.9	3.2	*
2020	31	25	6	1.6	2.6	*	1.6	2.5	*
2019	30	26	4	1.6	2.8	*	1.6	2.8	*
2018	40	36	4	2.1	3.9	*	2.1	3.9	*
Asian:									
2022	130	117	13	0.8	1.5	*	0.7	1.4	*
2021	140	120	20	0.9	1.5	0.2	0.8	1.5	0.2
2020	118	104	14	0.7	1.4	*	0.7	1.3	*
2019	154	139	15	1.0	1.9	*	0.9	1.8	*
2018	114	103	11	0.7	1.4	*	0.7	1.4	*
Black:									
2022	657	583	74	1.9	3.6	0.4	2.0	3.7	0.4
2021	619	545	74	1.8	3.4	0.4	1.9	3.4	0.4
2020	521	469	52	1.6	3.0	0.3	1.6	3.0	0.3
2019	572	513	59	1.7	3.3	0.3	1.7	3.4	0.3
2018	520	475	45	1.6	3.1	0.3	1.6	3.1	0.3
Native Hawaiian or Other Pacific Islander:									
2022	6	6	–	*	*	*	*	*	*
2021	12	11	1	*	*	*	*	*	*
2020	6	6	–	*	*	*	*	*	*
2019	13	12	1	*	*	*	*	*	*
2018	11	11	–	*	*	*	*	*	*
White:									
2022	3,022	2,709	313	1.8	3.3	0.4	1.8	3.2	0.4
2021	2,941	2,646	295	1.8	3.2	0.3	1.7	3.2	0.4
2020	2,655	2,386	269	1.6	2.9	0.3	1.6	2.9	0.3
2019	2,975	2,687	288	1.8	3.3	0.3	1.8	3.2	0.3
2018	3,006	2,728	278	1.8	3.3	0.3	1.8	3.3	0.3

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
– Quantity zero.
[1]Rates are on an annual basis per 100,000 population in specified group; see Technical Notes.
[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.
[3]Includes races and origins not shown separately; see Technical Notes.
[4]Excludes data for Tennessee; see Supplemental Technical Notes from "Deaths: Final Data for 2015," National Vital Statistics Reports, vol 66, no 6.
[5]Data include September 11, 2001, terrorism-related deaths for which death certificates were filed as of October 24, 2002; see Technical Notes from "Deaths: Final Data for 2001," National Vital Statistics Reports, vol 52, no 3.
[6]Includes people of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.
[7]Only one race was reported on the death certificate. Race and Hispanic-origin categories are consistent with 1997 OMB standards; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	All causes			Septicemia (A40–A41)			Human immunodeficiency virus (HIV) disease (B20–B24)			Malignant neoplasms (C00–C97)		
	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]	3,279,857	984.1	798.8	42,261	12.7	10.1	4,941	1.5	1.3	608,371	182.5	142.3
Alabama	62,294	1,227.6	989.1	1,168	23.0	17.9	83	1.6	1.5	10,328	203.5	154.4
Alaska	5,719	779.6	821.3	72	9.8	11.0	3	*	*	1,076	146.7	145.3
Arizona	74,082	1,006.7	784.6	519	7.1	5.5	103	1.4	1.4	13,171	179.0	132.9
Arkansas	37,855	1,242.9	999.7	646	21.2	16.9	27	0.9	0.8	6,638	218.0	168.1
California	313,161	802.4	686.0	1,852	4.7	4.0	558	1.4	1.3	60,449	154.9	129.8
Colorado	46,787	801.2	736.3	503	8.6	7.7	39	0.7	0.6	8,324	142.5	124.5
Connecticut	34,583	953.7	716.8	465	12.8	9.4	43	1.2	0.9	6,658	183.6	133.6
Delaware	11,351	1,114.6	829.1	130	12.8	9.1	14	*	*	2,373	233.0	160.7
District of Columbia	5,385	801.6	789.6	79	11.8	11.3	43	6.4	6.2	963	143.3	141.8
Florida	239,119	1,074.9	714.7	2,900	13.0	8.5	640	2.9	2.5	47,035	211.4	135.8
Georgia	102,342	937.8	871.6	1,786	16.4	14.7	312	2.9	2.6	18,302	167.7	147.0
Hawaii	13,228	918.5	615.9	141	9.8	6.6	12	*	*	2,614	181.5	122.4
Idaho	17,162	885.1	771.4	122	6.3	5.4	3	*	*	3,137	161.8	133.7
Illinois	122,963	977.3	784.9	1,822	14.5	11.4	122	1.0	0.8	23,456	186.4	145.1
Indiana	75,368	1,103.0	923.4	839	12.3	10.1	68	1.0	0.9	13,873	203.0	162.5
Iowa	33,973	1,061.5	798.0	376	11.7	8.9	15	*	*	6,285	196.4	146.1
Kansas	31,551	1,074.2	873.2	341	11.6	9.4	22	0.7	0.6	5,512	187.7	148.8
Kentucky	57,053	1,264.4	1,043.8	1,015	22.5	18.1	51	1.1	1.0	10,300	228.3	177.3
Louisiana	52,339	1,140.2	974.7	1,108	24.1	19.8	124	2.7	2.6	9,193	200.3	160.3
Maine	17,364	1,253.4	844.3	51	3.7	2.7	12	*	*	3,428	247.4	154.3
Maryland	56,456	915.8	746.5	986	16.0	12.7	149	2.4	2.0	10,819	175.5	136.8
Massachusetts	63,366	907.6	693.5	939	13.4	10.1	57	0.8	0.6	12,436	178.1	132.2
Michigan	110,499	1,101.2	855.4	1,326	13.2	9.9	89	0.9	0.8	21,032	209.6	154.4
Minnesota	51,222	895.9	710.3	502	8.8	6.9	30	0.5	0.4	10,284	179.9	139.0
Mississippi	37,803	1,285.8	1,073.3	393	13.4	10.9	76	2.6	2.5	6,665	226.7	178.4
Missouri	71,851	1,163.0	916.7	1,025	16.6	12.8	51	0.8	0.8	13,071	211.6	159.6
Montana	11,684	1,040.6	795.9	116	10.3	7.5	3	*	*	2,234	199.0	142.2
Nebraska	18,615	945.9	773.5	226	11.5	9.2	11	*	*	3,490	177.3	142.2
Nevada	30,960	974.3	842.1	272	8.6	7.2	49	1.5	1.4	5,420	170.6	138.9
New Hampshire	14,515	1,040.3	749.7	173	12.4	8.8	6	*	*	2,908	208.4	141.4
New Jersey	81,490	879.9	683.6	2,029	21.9	16.8	148	1.6	1.3	15,330	165.5	125.3
New Mexico	23,655	1,119.3	901.4	283	13.4	10.6	19	*	*	3,646	172.5	127.5
New York	173,944	884.0	664.5	2,512	12.8	9.5	364	1.8	1.6	32,655	166.0	122.4
North Carolina	112,923	1,055.5	877.1	1,500	14.0	11.4	170	1.6	1.4	20,409	190.8	149.0
North Dakota	7,041	903.5	739.2	89	11.4	9.3	3	*	*	1,214	155.8	128.4
Ohio	138,209	1,175.6	917.2	1,982	16.9	12.8	112	1.0	0.9	24,616	209.4	155.5
Oklahoma	47,976	1,193.5	1,025.6	364	9.1	7.8	63	1.6	1.6	8,378	208.4	171.6
Oregon	44,598	1,051.8	811.3	323	7.6	5.8	48	1.1	1.0	8,485	200.1	147.0
Pennsylvania	147,181	1,134.6	818.2	2,546	19.6	13.8	141	1.1	1.0	27,648	213.1	148.7
Rhode Island	10,704	978.7	714.0	75	6.9	4.9	11	*	*	2,091	191.2	136.5
South Carolina	61,052	1,155.7	918.8	908	17.2	13.2	126	2.4	2.1	11,015	208.5	153.2
South Dakota	9,016	991.0	801.0	105	11.5	9.4	5	*	*	1,705	187.4	144.7
Tennessee	84,989	1,205.3	1,009.2	968	13.7	11.1	107	1.5	1.4	14,625	207.4	162.3
Texas	241,441	804.0	816.9	3,586	11.9	11.9	556	1.9	1.8	43,403	144.5	140.8
Utah	21,886	647.4	755.0	270	8.0	9.3	22	0.7	0.6	3,501	103.6	116.1
Vermont	6,971	1,077.3	757.6	38	5.9	4.1	3	*	*	1,485	229.5	150.2
Virginia	82,935	955.1	794.1	1,072	12.3	9.9	111	1.3	1.0	15,842	182.4	144.8
Washington	69,194	888.7	757.9	720	9.2	7.8	56	0.7	0.6	13,432	172.5	140.9
West Virginia	27,507	1,549.6	1,115.6	292	16.4	11.4	21	1.2	1.0	4,679	263.6	176.3
Wisconsin	60,590	1,028.2	791.5	638	10.8	8.1	37	0.6	0.6	11,654	197.8	145.3
Wyoming	5,905	1,015.7	826.8	68	11.7	9.0	3	*	*	1,084	186.5	143.0
Puerto Rico	35,111	1,089.8	650.1	703	21.8	12.2	129	4.0	3.1	5,375	166.8	99.0
U.S. Virgin Islands	731	693.5	531.2	14	*	*	2	*	*	113	107.2	71.4
Guam	1,235	730.4	965.6	54	31.9	43.5	–	*	*	200	118.3	148.5
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	271	526.5	839.3	6	*	*	–	*	*	48	93.2	136.0

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	Diabetes mellitus (E10–E14)			Parkinson disease (G20–G21)			Alzheimer disease (G30)			Diseases of heart (I00–I09,I11,I13,I20–I51)		
	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]	101,209	30.4	24.1	39,915	12.0	9.5	120,122	36.0	28.9	702,880	210.9	167.2
Alabama	1,645	32.4	25.4	696	13.7	10.7	2,655	52.3	42.2	14,958	294.8	234.2
Alaska	184	25.1	25.6	62	8.5	10.9	178	24.3	33.1	1,013	138.1	145.7
Arizona	2,423	32.9	25.1	1,007	13.7	9.9	2,823	38.4	28.4	14,593	198.3	148.5
Arkansas	1,397	45.9	36.0	382	12.5	9.8	1,577	51.8	41.0	8,664	284.5	224.1
California	11,618	29.8	25.0	4,289	11.0	9.4	17,363	44.5	37.5	66,340	170.0	142.4
Colorado	1,215	20.8	18.5	665	11.4	10.7	1,871	32.0	31.4	8,389	143.6	131.4
Connecticut	746	20.6	15.2	431	11.9	8.7	1,080	29.8	21.5	6,899	190.3	137.8
Delaware	361	35.4	25.1	131	12.9	9.0	435	42.7	31.5	2,220	218.0	156.8
District of Columbia	123	18.3	18.2	45	6.7	6.9	70	10.4	10.2	1,239	184.4	182.6
Florida	7,549	33.9	22.3	3,169	14.2	8.5	6,397	28.8	17.0	49,877	224.2	140.9
Georgia	2,693	24.7	21.9	1,168	10.7	10.3	4,219	38.7	39.3	21,728	199.1	183.9
Hawaii	363	25.2	17.2	186	12.9	8.0	575	39.9	22.0	2,862	198.7	128.4
Idaho	473	24.4	20.5	243	12.5	10.8	848	43.7	39.5	3,491	180.0	156.3
Illinois	3,463	27.5	21.8	1,504	12.0	9.4	4,111	32.7	25.6	26,781	212.9	166.6
Indiana	2,493	36.5	29.8	904	13.2	10.9	2,259	33.1	27.8	15,385	225.2	185.0
Iowa	1,009	31.5	24.0	466	14.6	10.7	1,348	42.1	29.4	7,786	243.3	176.8
Kansas	963	32.8	26.2	423	14.4	11.5	944	32.1	25.2	6,440	219.3	173.2
Kentucky	1,668	37.0	29.4	548	12.1	10.0	1,509	33.4	28.4	11,654	258.3	208.6
Louisiana	1,655	36.1	29.9	540	11.8	9.9	2,094	45.6	40.0	12,284	267.6	224.0
Maine	603	43.5	28.2	228	16.5	10.3	543	39.2	24.9	3,592	259.3	167.1
Maryland	1,796	29.1	23.1	627	10.2	8.2	1,186	19.2	15.5	12,086	196.1	155.8
Massachusetts	1,503	21.5	16.1	747	10.7	8.0	1,596	22.9	17.0	12,427	178.0	132.3
Michigan	3,418	34.1	25.6	1,331	13.3	10.1	4,200	41.9	32.4	27,266	271.7	206.3
Minnesota	1,514	26.5	20.5	805	14.1	10.9	2,358	41.2	31.6	9,175	160.5	124.1
Mississippi	1,256	42.7	34.7	367	12.5	10.2	1,679	57.1	48.5	8,858	301.3	248.0
Missouri	1,878	30.4	23.5	818	13.2	10.1	2,620	42.4	32.5	16,143	261.3	199.8
Montana	329	29.3	22.0	155	13.8	10.2	338	30.1	22.5	2,539	226.1	165.9
Nebraska	539	27.4	22.1	275	14.0	11.4	746	37.9	30.0	3,804	193.3	154.3
Nevada	898	28.3	23.4	267	8.4	7.3	863	27.2	25.3	7,337	230.9	196.8
New Hampshire	454	32.5	22.3	218	15.6	11.1	462	33.1	23.9	2,951	211.5	147.5
New Jersey	2,099	22.7	17.3	939	10.1	7.8	2,320	25.0	18.8	18,707	202.0	152.8
New Mexico	860	40.7	31.2	249	11.8	8.7	733	34.7	26.6	4,369	206.7	156.8
New York	4,788	24.3	18.2	1,751	8.9	6.5	3,265	16.6	11.7	43,237	219.7	159.2
North Carolina	3,834	35.8	28.8	1,278	11.9	9.8	4,272	39.9	33.9	21,763	203.4	165.8
North Dakota	234	30.0	25.1	79	10.1	8.1	336	43.1	31.6	1,538	197.4	155.0
Ohio	4,268	36.3	27.6	1,565	13.3	10.1	4,953	42.1	32.3	30,041	255.5	193.9
Oklahoma	1,586	39.5	33.8	484	12.0	10.2	1,613	40.1	34.7	12,268	305.2	257.1
Oregon	1,454	34.3	25.4	626	14.8	11.0	2,030	47.9	37.0	8,152	192.3	145.4
Pennsylvania	4,124	31.8	22.6	1,725	13.3	9.2	4,011	30.9	20.9	32,522	250.7	173.4
Rhode Island	293	26.8	18.9	124	11.3	8.1	475	43.4	29.8	2,369	216.6	152.6
South Carolina	1,784	33.8	25.8	684	12.9	9.9	2,429	46.0	37.4	12,038	227.9	177.7
South Dakota	339	37.3	29.4	100	11.0	8.8	435	47.8	36.5	1,850	203.3	158.2
Tennessee	2,722	38.6	31.2	957	13.6	11.2	2,933	41.6	36.0	18,727	265.6	218.3
Texas	7,853	26.2	25.6	3,091	10.3	11.1	10,427	34.7	38.8	50,672	168.7	172.3
Utah	763	22.6	25.4	343	10.1	12.4	1,057	31.3	39.8	4,460	131.9	159.4
Vermont	179	27.7	18.9	105	16.2	10.9	329	50.8	34.5	1,589	245.6	165.1
Virginia	2,875	33.1	26.9	1,067	12.3	10.2	2,506	28.9	24.4	16,902	194.6	159.2
Washington	2,199	28.2	23.3	928	11.9	10.2	3,695	47.5	41.6	13,218	169.8	142.7
West Virginia	1,056	59.5	41.1	282	15.9	10.7	755	42.5	29.5	5,399	304.1	209.5
Wisconsin	1,490	25.3	19.1	780	13.2	10.0	2,361	40.1	30.3	13,128	222.8	166.6
Wyoming	180	31.0	24.5	61	10.5	8.5	240	41.3	34.7	1,150	197.8	157.1
Puerto Rico	3,079	95.6	54.7	262	8.1	4.2	3,004	93.2	45.7	6,005	186.4	102.4
U.S. Virgin Islands	24	22.8	18.6	2	*	*	50	47.4	37.0	179	169.8	120.5
Guam	15	*	*	5	*	*	13	*	*	398	235.4	313.4
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	24	46.6	65.3	1	*	*	-	*	*	46	89.4	100.2

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	Essential hypertension and hypertensive renal disease (I10,I12,I15)			Cerebrovascular diseases (I60–I69)			Influenza and pneumonia (J09–J18)			Chronic lower respiratory diseases (J40–J47)		
	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]	43,293	13.0	10.3	165,393	49.6	39.5	47,052	14.1	11.3	147,382	44.2	34.3
Alabama	849	16.7	13.2	3,291	64.9	51.1	957	18.9	14.9	3,157	62.2	46.9
Alaska	56	7.6	8.6	223	30.4	35.1	75	10.2	10.4	212	28.9	30.2
Arizona	1,109	15.1	11.3	3,390	46.1	34.5	962	13.1	10.1	3,577	48.6	35.1
Arkansas	454	14.9	12.1	1,774	58.2	46.0	653	21.4	17.2	2,387	78.4	59.7
California	6,727	17.2	14.4	18,442	47.3	39.8	5,308	13.6	11.5	11,977	30.7	25.8
Colorado	400	6.8	6.4	2,098	35.9	33.8	469	8.0	7.3	2,467	42.2	38.0
Connecticut	386	10.6	7.7	1,504	41.5	30.1	563	15.5	11.2	1,226	33.8	24.3
Delaware	113	11.1	8.1	805	79.0	56.9	146	14.3	10.1	473	46.4	32.0
District of Columbia	82	12.2	11.9	287	42.7	42.1	58	8.6	8.5	120	17.9	17.3
Florida	3,289	14.8	9.3	16,385	73.7	45.1	2,887	13.0	8.3	11,172	50.2	30.6
Georgia	1,435	13.1	12.1	5,110	46.8	44.0	1,333	12.2	11.3	4,782	43.8	39.6
Hawaii	180	12.5	8.1	905	62.8	39.5	281	19.5	12.4	358	24.9	15.6
Idaho	148	7.6	6.7	765	39.5	34.4	201	10.4	9.3	986	50.9	41.6
Illinois	1,496	11.9	9.3	6,672	53.0	41.4	2,011	16.0	12.7	5,251	41.7	32.2
Indiana	796	11.6	9.6	3,478	50.9	41.9	887	13.0	10.7	4,544	66.5	53.0
Iowa	527	16.5	11.9	1,412	44.1	32.0	500	15.6	11.5	1,730	54.1	39.0
Kansas	554	18.9	14.7	1,324	45.1	35.8	486	16.5	13.2	1,676	57.1	44.4
Kentucky	601	13.3	10.9	2,366	52.4	42.9	888	19.7	16.1	3,260	72.2	55.8
Louisiana	450	9.8	8.3	2,724	59.3	50.2	586	12.8	10.7	2,201	47.9	38.8
Maine	165	11.9	7.4	639	46.1	29.4	281	20.3	13.3	901	65.0	40.0
Maryland	735	11.9	9.5	3,360	54.5	43.8	708	11.5	9.3	1,915	31.1	24.5
Massachusetts	769	11.0	8.1	2,396	34.3	25.6	934	13.4	10.1	2,378	34.1	25.0
Michigan	1,269	12.6	9.6	5,802	57.8	44.2	1,442	14.4	11.0	5,292	52.7	38.5
Minnesota	944	16.5	12.5	2,347	41.1	31.8	527	9.2	7.3	2,175	38.0	29.1
Mississippi	641	21.8	18.0	1,943	66.1	54.2	761	25.9	21.1	2,214	75.3	59.5
Missouri	554	9.0	6.8	3,153	51.0	39.1	1,098	17.8	13.7	3,809	61.7	45.9
Montana	96	8.5	6.3	400	35.6	26.5	113	10.1	7.4	625	55.7	39.6
Nebraska	430	21.9	17.2	867	44.1	35.1	288	14.6	11.9	929	47.2	37.4
Nevada	468	14.7	12.8	1,445	45.5	40.0	569	17.9	15.4	1,618	50.9	42.8
New Hampshire	125	9.0	6.3	600	43.0	30.3	163	11.7	8.5	745	53.4	36.3
New Jersey	1,017	11.0	8.3	3,643	39.3	30.0	1,149	12.4	9.5	2,667	28.8	21.8
New Mexico	181	8.6	6.6	1,044	49.4	38.1	365	17.3	13.4	1,113	52.7	38.6
New York	2,836	14.4	10.3	6,605	33.6	24.5	4,065	20.7	15.1	6,105	31.0	22.6
North Carolina	1,301	12.2	9.9	6,189	57.8	47.7	1,523	14.2	11.7	5,280	49.4	38.7
North Dakota	87	11.2	8.2	330	42.3	32.8	125	16.0	13.0	305	39.1	30.7
Ohio	1,621	13.8	10.4	7,202	61.3	46.5	1,906	16.2	12.5	6,807	57.9	42.6
Oklahoma	432	10.7	9.2	1,884	46.9	39.5	656	16.3	14.0	3,053	75.9	62.3
Oregon	707	16.7	12.5	2,630	62.0	47.1	370	8.7	6.7	2,020	47.6	34.4
Pennsylvania	1,369	10.6	7.2	6,870	53.0	36.6	2,022	15.6	10.9	5,856	45.1	30.8
Rhode Island	187	17.1	12.0	448	41.0	29.2	91	8.3	6.1	433	39.6	27.4
South Carolina	728	13.8	10.6	3,100	58.7	45.6	697	13.2	10.3	2,851	54.0	39.7
South Dakota	124	13.6	10.5	392	43.1	33.1	130	14.3	11.3	418	45.9	35.3
Tennessee	1,043	14.8	12.3	3,949	56.0	46.4	1,330	18.9	15.6	4,214	59.8	47.0
Texas	2,567	8.5	8.8	12,225	40.7	42.3	3,025	10.1	10.3	10,014	33.3	34.0
Utah	216	6.4	7.6	959	28.4	34.6	266	7.9	9.3	894	26.4	30.3
Vermont	69	10.7	7.2	261	40.3	27.1	71	11.0	7.3	291	45.0	29.6
Virginia	991	11.4	9.4	4,326	49.8	41.2	1,068	12.3	10.0	3,240	37.3	29.6
Washington	963	12.4	10.4	3,339	42.9	36.7	803	10.3	8.8	2,925	37.6	30.7
West Virginia	303	17.1	11.8	1,117	62.9	43.4	535	30.1	21.5	1,676	94.4	61.9
Wisconsin	657	11.1	8.4	2,761	46.9	35.3	638	10.8	8.2	2,709	46.0	33.7
Wyoming	46	7.9	6.1	212	36.5	29.8	82	14.1	12.1	354	60.9	45.4
Puerto Rico	688	21.4	11.6	1,327	41.2	22.7	836	25.9	14.4	1,034	32.1	17.0
U.S. Virgin Islands	38	36.0	25.3	37	35.1	26.6	11	*	*	8	*	*
Guam	3	*	*	91	53.8	69.9	21	12.4	14.6	25	14.8	22.8
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	10	*	*	24	46.6	85.5	3	*	*	4	*	*

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	Chronic liver disease and cirrhosis (K70,K73–K74)			Nephritis, nephrotic syndrome, and nephrosis (N00–N07,N17–N19,N25–N27)			COVID-19 (U07.1)			Accidents (unintentional injuries) (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]	54,803	16.4	13.8	57,937	17.4	13.8	186,552	56.0	44.5	227,039	68.1	64.0
Alabama	967	19.1	15.5	1,324	26.1	20.3	3,576	70.5	54.6	3,524	69.4	68.3
Alaska	185	25.2	23.7	97	13.2	14.7	264	36.0	38.3	561	76.5	77.6
Arizona	1,492	20.3	17.5	836	11.4	8.5	4,607	62.6	47.4	5,928	80.6	75.6
Arkansas	606	19.9	16.4	822	27.0	21.2	2,114	69.4	54.4	2,062	67.7	64.9
California	6,630	17.0	14.9	4,990	12.8	10.8	17,504	44.8	37.8	21,168	54.2	51.0
Colorado	1,212	20.8	18.6	555	9.5	8.7	2,259	38.7	34.8	4,268	73.1	69.7
Connecticut	535	14.8	12.0	763	21.0	15.2	2,022	55.8	40.8	2,640	72.8	66.5
Delaware	170	16.7	12.3	205	20.1	14.4	619	60.8	43.7	883	86.7	83.8
District of Columbia	61	9.1	9.0	49	7.3	7.2	226	33.6	33.1	635	94.5	90.9
Florida	3,848	17.3	12.9	3,824	17.2	11.0	12,165	54.7	34.4	17,115	76.9	68.9
Georgia	1,556	14.3	12.6	2,360	21.6	19.7	5,635	51.6	47.1	6,519	59.7	58.9
Hawaii	145	10.1	7.8	300	20.8	13.5	444	30.8	20.3	693	48.1	40.9
Idaho	315	16.2	14.2	176	9.1	7.6	823	42.4	36.3	1,163	60.0	57.9
Illinois	1,807	14.4	12.1	2,916	23.2	18.2	7,281	57.9	45.5	7,597	60.4	55.9
Indiana	1,212	17.7	15.3	1,541	22.6	18.6	4,577	67.0	54.9	4,989	73.0	71.6
Iowa	522	16.3	14.3	488	15.2	11.1	1,714	53.6	39.7	1,845	57.6	49.8
Kansas	481	16.4	14.6	644	21.9	17.4	2,043	69.6	56.1	1,995	67.9	63.8
Kentucky	867	19.2	16.0	1,227	27.2	21.9	4,083	90.5	72.9	4,193	92.9	91.5
Louisiana	649	14.1	11.8	1,072	23.4	19.3	2,360	51.4	43.1	4,320	94.1	93.9
Maine	304	21.9	15.9	243	17.5	10.8	798	57.6	37.2	1,391	100.4	93.5
Maryland	665	10.8	9.0	752	12.2	9.7	3,088	50.1	40.2	3,341	54.2	48.8
Massachusetts	949	13.6	10.9	1,406	20.1	15.0	3,177	45.5	34.0	4,783	68.5	61.6
Michigan	1,673	16.7	13.8	2,106	21.0	15.9	5,969	59.5	45.1	6,425	64.0	59.2
Minnesota	908	15.9	13.5	607	10.6	8.2	2,299	40.2	31.3	3,882	67.9	61.1
Mississippi	589	20.0	17.0	761	25.9	21.3	2,300	78.2	63.8	2,367	80.5	78.4
Missouri	1,047	16.9	14.2	1,684	27.3	21.0	4,318	69.9	53.8	4,940	80.0	75.6
Montana	274	24.4	21.4	164	14.6	11.0	516	46.0	33.6	803	71.5	65.4
Nebraska	299	15.2	14.1	273	13.9	11.1	873	44.4	35.5	989	50.3	46.8
Nevada	636	20.0	17.0	288	9.1	7.7	2,198	69.2	58.3	2,110	66.4	62.8
New Hampshire	266	19.1	14.8	213	15.3	10.7	615	44.1	30.3	1,039	74.5	66.7
New Jersey	989	10.7	8.6	1,768	19.1	14.6	4,947	53.4	40.6	4,956	53.5	49.7
New Mexico	829	39.2	36.3	371	17.6	13.4	1,665	78.8	61.8	2,126	100.6	98.4
New York	1,953	9.9	8.1	2,644	13.4	9.8	11,129	56.6	41.4	10,894	55.4	50.2
North Carolina	1,801	16.8	13.8	2,169	20.3	16.4	6,275	58.7	47.4	8,858	82.8	80.0
North Dakota	143	18.4	18.2	118	15.1	11.9	330	42.3	34.2	451	57.9	54.0
Ohio	2,009	17.1	13.9	2,548	21.7	16.3	9,333	79.4	60.1	9,682	82.4	78.5
Oklahoma	900	22.4	20.0	523	13.0	11.1	3,413	84.9	71.9	3,421	85.1	81.4
Oregon	893	21.1	17.1	492	11.6	8.8	1,902	44.9	34.1	3,231	76.2	67.9
Pennsylvania	1,834	14.1	10.8	3,135	24.2	16.7	8,745	67.4	47.5	10,060	77.6	70.4
Rhode Island	205	18.7	14.9	124	11.3	8.0	535	48.9	35.0	848	77.5	67.6
South Carolina	1,088	20.6	16.8	955	18.1	13.6	3,502	66.3	51.0	4,827	91.4	88.2
South Dakota	283	31.1	31.1	81	8.9	7.2	453	49.8	39.4	600	65.9	60.7
Tennessee	1,398	19.8	16.6	1,245	17.7	14.3	5,400	76.6	62.0	7,114	100.9	98.4
Texas	5,079	16.9	15.9	4,766	15.9	16.0	14,573	48.5	49.0	15,252	50.8	51.1
Utah	322	9.5	10.3	390	11.5	13.8	970	28.7	33.3	1,537	45.5	50.2
Vermont	95	14.7	11.5	43	6.6	4.3	238	36.8	25.2	584	90.3	81.4
Virginia	1,209	13.9	11.5	1,703	19.6	16.0	4,731	54.5	44.4	5,275	60.7	57.1
Washington	1,371	17.6	15.1	577	7.4	6.2	2,918	37.5	31.6	5,546	71.2	66.2
West Virginia	451	25.4	18.6	623	35.1	24.5	1,857	104.6	71.5	2,247	126.6	121.6
Wisconsin	919	15.6	12.5	894	15.2	11.4	2,878	48.8	36.7	4,951	84.0	74.9
Wyoming	162	27.9	24.3	82	14.1	11.1	291	50.1	40.0	411	70.7	65.3
Puerto Rico	368	11.4	7.3	1,227	38.1	21.7	1,998	62.0	34.6	1,665	51.7	45.4
U.S. Virgin Islands	3	*	*	16	*	*	29	27.5	19.2	32	30.4	27.3
Guam	16	*	*	53	31.3	39.0	87	51.5	80.8	41	24.2	27.7
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	8	*	*	4	*	*	18	*	*	7	*	*

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	Motor vehicle accidents[3]			Intentional self-harm (suicide) (*U03,X60–X84,Y87.0)			Assault (homicide) (*U01–*U02,X85–Y09,Y87.1)			Alcohol-induced causes[4]		
	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]	46,027	13.8	13.3	49,476	14.8	14.2	24,849	7.5	7.7	51,191	15.4	13.5
Alabama	1,039	20.5	20.0	840	16.6	16.3	706	13.9	14.9	502	9.9	8.9
Alaska.	117	15.9	15.6	200	27.3	27.6	76	10.4	10.2	286	39.0	36.6
Arizona	1,366	18.6	17.8	1,603	21.8	20.6	629	8.5	9.0	1,623	22.1	20.2
Arkansas.	651	21.4	20.9	547	18.0	18.0	345	11.3	11.8	386	12.7	11.4
California	5,041	12.9	12.4	4,312	11.0	10.4	2,304	5.9	5.9	6,708	17.2	15.5
Colorado.	836	14.3	13.7	1,293	22.1	21.1	417	7.1	7.2	1,581	27.1	24.5
Connecticut	387	10.7	10.2	398	11.0	10.6	147	4.1	4.3	509	14.0	12.0
Delaware.	155	15.2	14.9	130	12.8	11.4	64	6.3	7.0	174	17.1	14.1
District of Columbia	59	8.8	8.4	44	6.5	6.1	169	25.2	23.7	96	14.3	14.5
Florida	3,706	16.7	15.9	3,446	15.5	14.1	1,473	6.6	7.2	3,262	14.7	11.7
Georgia.	1,908	17.5	17.1	1,624	14.9	14.6	1,223	11.2	11.3	1,273	11.7	10.6
Hawaii.	113	7.8	7.3	246	17.1	16.6	42	2.9	3.0	120	8.3	7.1
Idaho	271	14.0	13.6	444	22.9	22.2	49	2.5	2.7	375	19.3	17.0
Illinois	1,352	10.7	10.4	1,533	12.2	11.7	1,312	10.4	10.9	1,601	12.7	11.4
Indiana	1,012	14.8	14.5	1,152	16.9	16.4	553	8.1	8.4	1,151	16.8	15.1
Iowa	385	12.0	11.3	590	18.4	18.5	90	2.8	2.9	591	18.5	16.8
Kansas	457	15.6	15.3	596	20.3	20.5	161	5.5	5.8	487	16.6	15.6
Kentucky.	786	17.4	16.7	823	18.2	18.0	348	7.7	8.3	646	14.3	12.6
Louisiana	950	20.7	20.5	726	15.8	15.6	862	18.8	19.8	491	10.7	9.3
Maine	201	14.5	13.7	268	19.3	17.7	32	2.3	2.6	317	22.9	18.5
Maryland	626	10.2	9.8	608	9.9	9.5	658	10.7	11.4	601	9.7	8.6
Massachusetts	479	6.9	6.3	626	9.0	8.3	171	2.4	2.5	959	13.7	11.8
Michigan.	1,223	12.2	11.7	1,503	15.0	14.7	801	8.0	8.6	1,598	15.9	13.9
Minnesota.	553	9.7	9.3	860	15.0	14.8	207	3.6	3.8	1,171	20.5	17.8
Mississippi	763	26.0	25.8	417	14.2	14.0	576	19.6	20.7	442	15.0	13.0
Missouri	1,111	18.0	17.3	1,219	19.7	19.1	744	12.0	12.8	911	14.7	13.3
Montana	231	20.6	19.8	329	29.3	28.7	57	5.1	5.4	343	30.5	27.3
Nebraska	279	14.2	14.2	306	15.5	15.6	73	3.7	3.7	371	18.9	18.1
Nevada	440	13.8	13.4	698	22.0	21.0	244	7.7	7.8	759	23.9	20.7
New Hampshire	154	11.0	9.8	247	17.7	16.6	25	1.8	1.8	295	21.1	17.1
New Jersey.	717	7.7	7.3	769	8.3	7.7	332	3.6	3.8	777	8.4	7.3
New Mexico	486	23.0	23.4	525	24.8	24.7	290	13.7	14.5	925	43.8	42.7
New York	1,384	7.0	6.6	1,765	9.0	8.5	853	4.3	4.5	2,003	10.2	8.8
North Carolina	1,854	17.3	16.7	1,614	15.1	14.4	954	8.9	9.2	1,532	14.3	12.4
North Dakota	108	13.9	13.5	169	21.7	22.5	28	3.6	3.5	195	25.0	25.0
Ohio	1,395	11.9	11.5	1,798	15.3	15.0	929	7.9	8.5	1,707	14.5	12.4
Oklahoma	777	19.3	18.9	857	21.3	21.4	317	7.9	8.3	836	20.8	19.3
Oregon	616	14.5	13.7	883	20.8	19.3	212	5.0	5.1	1,264	29.8	24.5
Pennsylvania	1,337	10.3	9.8	1,955	15.1	14.2	1,068	8.2	8.9	1,420	10.9	9.1
Rhode Island	77	7.0	6.4	126	11.5	10.6	22	2.0	2.0	202	18.5	15.3
South Carolina	1,141	21.6	21.4	853	16.1	15.4	595	11.3	11.8	954	18.1	15.3
South Dakota	167	18.4	18.3	192	21.1	21.6	56	6.2	6.9	307	33.7	34.5
Tennessee.	1,338	19.0	18.5	1,245	17.7	16.7	738	10.5	11.0	1,328	18.8	16.4
Texas	4,584	15.3	15.1	4,368	14.5	14.4	2,281	7.6	7.6	3,285	10.9	10.4
Utah	323	9.6	9.7	718	21.2	22.1	72	2.1	2.2	373	11.0	11.8
Vermont	81	12.5	11.5	128	19.8	18.0	18	*	*	144	22.3	16.8
Virginia.	1,086	12.5	11.8	1,208	13.9	13.3	653	7.5	7.8	965	11.1	9.6
Washington	844	10.8	10.4	1,243	16.0	14.9	424	5.4	5.4	1,658	21.3	18.4
West Virginia	290	16.3	15.1	353	19.9	18.3	105	5.9	6.2	304	17.1	13.7
Wisconsin.	661	11.2	10.5	924	15.7	15.1	327	5.5	6.0	1,177	20.0	16.6
Wyoming	110	18.9	18.7	155	26.7	25.6	17	*	*	206	35.4	31.1
Puerto Rico	282	8.8	8.3	201	6.2	5.7	585	18.2	19.9	274	8.5	5.9
U.S. Virgin Islands	15	*	*	5	*	*	32	30.4	35.9	11	*	*
Guam	13	*	*	28	16.6	17.8	10	*	*	5	*	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	5	*	*	6	*	*	3	*	*	2	*	*

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

Area	Drug-induced causes[5]			Injury by firearms[6]		
	Number	Rate	Age-adjusted rate[1]	Number	Rate	Age-adjusted rate[1]
United States[2]	112,109	33.6	33.8	48,204	14.5	14.2
Alabama	1,632	32.2	34.3	1,278	25.2	25.5
Alaska	273	37.2	36.7	164	22.4	22.4
Arizona	2,799	38.0	39.0	1,535	20.9	20.1
Arkansas	651	21.4	22.8	666	21.9	21.9
California	11,393	29.2	28.0	3,484	8.9	8.6
Colorado	1,882	32.2	30.9	1,036	17.7	17.1
Connecticut	1,527	42.1	41.5	252	6.9	6.9
Delaware	562	55.2	56.7	124	12.2	11.9
District of Columbia	465	69.2	66.2	154	22.9	21.4
Florida	7,776	35.0	36.1	3,232	14.5	14.0
Georgia	2,804	25.7	26.0	2,163	19.8	19.7
Hawaii	311	21.6	20.3	66	4.6	4.5
Idaho	416	21.5	22.1	338	17.4	17.0
Illinois	3,942	31.3	30.6	1,798	14.3	14.4
Indiana	2,734	40.0	41.7	1,211	17.7	17.4
Iowa	498	15.6	16.1	367	11.5	11.2
Kansas	784	26.7	27.5	492	16.8	16.8
Kentucky	2,375	52.6	55.4	840	18.6	18.8
Louisiana	2,445	53.3	56.1	1,266	27.6	28.2
Maine	726	52.4	55.6	179	12.9	11.7
Maryland	2,636	42.8	41.2	813	13.2	13.6
Massachusetts	2,787	39.9	39.3	263	3.8	3.7
Michigan	3,065	30.5	31.3	1,504	15.0	15.0
Minnesota	1,503	26.3	26.6	561	9.8	9.6
Mississippi	791	26.9	28.7	848	28.8	29.6
Missouri	2,264	36.6	38.0	1,489	24.1	24.2
Montana	215	19.1	20.0	274	24.4	23.9
Nebraska	249	12.7	13.0	244	12.4	12.2
Nevada	1,046	32.9	31.6	618	19.4	18.9
New Hampshire	496	35.5	36.6	156	11.2	10.1
New Jersey	3,059	33.0	32.3	468	5.1	5.0
New Mexico	1,056	50.0	51.9	571	27.0	27.3
New York	6,564	33.4	32.4	1,044	5.3	5.3
North Carolina	4,435	41.5	42.9	1,831	17.1	16.8
North Dakota	157	20.1	21.0	125	16.0	16.4
Ohio	5,312	45.2	47.0	1,831	15.6	15.6
Oklahoma	1,244	30.9	31.9	797	19.8	19.8
Oregon	1,563	36.9	35.1	655	15.4	14.4
Pennsylvania	5,277	40.7	41.6	1,941	15.0	14.7
Rhode Island	426	38.9	38.2	37	3.4	3.1
South Carolina	2,373	44.9	46.4	1,105	20.9	20.8
South Dakota	104	11.4	12.2	141	15.5	15.7
Tennessee	3,955	56.1	57.9	1,480	21.0	20.5
Texas	5,725	19.1	19.0	4,630	15.4	15.3
Utah	668	19.8	21.1	446	13.2	13.7
Vermont	284	43.9	47.2	84	13.0	12.0
Virginia	2,615	30.1	30.1	1,316	15.2	14.9
Washington	2,878	37.0	35.4	1,022	13.1	12.4
West Virginia	1,405	79.1	84.8	311	17.5	16.2
Wisconsin	1,834	31.1	32.4	830	14.1	14.0
Wyoming	128	22.0	22.2	124	21.3	20.4
Puerto Rico	831	25.8	27.3	597	18.5	20.2
U.S. Virgin Islands	1	*	*	32	30.4	35.7
Guam	2	*	*	7	*	*
American Samoa	---	---	---	---	---	---
Northern Marianas	1	*	*	-	*	*

See footnotes at end of table.

Table 17. Number of deaths, death rate, and age-adjusted death rate for major causes of death: United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022—Con.

[Rates per 100,000 population; age-adjusted rates per 100,000 U.S. standard population; see Technical Notes in this report. Codes in parentheses after causes of death are categories of the *International Classification of Diseases, 10th Revision* (ICD–10). An asterisk (*) preceding a cause-of-death code indicates that the code is not included in ICD–10; see Technical Notes]

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* Estimate does not meet National Center for Health Statistics standards of reliability or precision; see Technical Notes.

– Quantity zero

--- Data not available.

[1]Death rates are affected by the 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, U.S. 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.

[4]Causes of death attributable to alcohol-induced mortality include ICD–10 codes E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45,X65, and Y15; see Technical Notes.

[5]Causes of death attributable to drug-induced mortality include ICD–10 codes D52.1 ,D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, 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, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2–J70.4, K85.3, L10.5, L27.0–L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1–R78.5, X40–X44, X60–X64, X85, and Y10–Y14; see Technical Notes.

[6]Causes of death attributable to Injury by firearms include ICD–10 codes *U01.4, W32–W34, X72–X74, X93–X95, Y22–Y24, and Y35.0; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 18. Infant, neonatal, and postneonatal mortality rates, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000–2022

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

Hispanic origin and race and year	Infant mortality rate			Neonatal mortality rate			Postneonatal mortality rate		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All races and origins[1]									
2022.	5.60	6.07	5.12	3.58	3.80	3.34	2.03	2.26	1.78
2021.	5.44	5.82	5.03	3.48	3.68	3.28	1.95	2.14	1.75
2020.	5.42	5.88	4.94	3.56	3.84	3.26	1.86	2.04	1.68
2019.	5.58	6.09	5.05	3.68	4.01	3.34	1.90	2.08	1.71
2018.	5.66	6.23	5.07	3.77	4.13	3.39	1.89	2.09	1.68
2017.	5.79	6.32	5.24	3.84	4.19	3.49	1.95	2.13	1.76
2016.	5.87	6.38	5.34	3.87	4.19	3.54	2.00	2.19	1.80
2015.	5.90	6.39	5.38	3.93	4.22	3.64	1.96	2.17	1.74
2014.	5.82	6.31	5.30	3.94	4.25	3.62	1.88	2.07	1.68
2013.	5.96	6.52	5.38	4.04	4.37	3.68	1.93	2.15	1.70
2012.	5.98	6.50	5.43	4.01	4.34	3.67	1.97	2.16	1.76
2011.	6.07	6.58	5.52	4.06	4.36	3.73	2.01	2.22	1.79
2010.	6.15	6.69	5.57	4.05	4.37	3.71	2.10	2.32	1.87
2009.	6.39	7.01	5.75	4.18	4.53	3.81	2.22	2.48	1.94
2008.	6.61	7.21	5.97	4.29	4.67	3.89	2.32	2.54	2.08
2007.	6.75	7.38	6.09	4.42	4.79	4.02	2.34	2.58	2.07
2006.	6.69	7.32	6.03	4.45	4.84	4.05	2.24	2.48	1.98
2005.	6.87	7.56	6.15	4.54	4.93	4.12	2.34	2.63	2.03
2004.	6.79	7.47	6.09	4.52	4.94	4.09	2.27	2.53	2.00
2003.	6.85	7.60	6.07	4.62	5.08	4.14	2.23	2.52	1.94
2002.	6.97	7.64	6.27	4.66	5.06	4.25	2.31	2.58	2.03
2001.	6.85	7.52	6.14	4.54	4.97	4.08	2.31	2.55	2.06
2000.	6.91	7.57	6.21	4.63	5.06	4.17	2.28	2.51	2.04
1990.	9.22	10.26	8.13	5.85	6.50	5.16	3.38	3.76	2.97
1980.	12.60	13.93	11.21	8.48	9.31	7.60	4.13	4.62	3.61
1970.	20.01	22.37	17.52	15.08	16.96	13.10	4.93	5.41	4.42
1960.	26.04	29.33	22.59	18.73	21.24	16.09	7.31	8.10	6.49
1950.	29.21	32.75	25.48	20.50	23.34	17.50	8.71	9.41	7.98
1940.	47.02	52.45	41.29	28.75	32.56	24.74	18.27	19.89	16.55
Hispanic[2,3]									
2022.	5.08	5.47	4.68	3.47	3.65	3.28	1.62	1.82	1.40
2021.	5.03	5.37	4.67	3.43	3.62	3.23	1.60	1.75	1.44
2020.	4.89	5.36	4.40	3.38	3.70	3.05	1.51	1.66	1.35
2019.	5.20	5.68	4.69	3.59	3.96	3.20	1.61	1.73	1.49
2018.	5.06	5.55	4.56	3.54	3.88	3.18	1.52	1.67	1.38
2017.	5.35	5.76	4.93	3.73	4.00	3.46	1.62	1.76	1.47
2016.	5.24	5.72	4.75	3.63	3.94	3.30	1.62	1.78	1.45
2015.	5.20	5.56	4.83	3.73	4.02	3.42	1.47	1.54	1.41
2014.	5.22	5.63	4.79	3.67	3.98	3.34	1.55	1.66	1.45
2013.	5.27	5.65	4.88	3.73	3.99	3.45	1.54	1.66	1.43
2012.	5.30	5.76	4.83	3.71	4.05	3.35	1.60	1.71	1.47
2011.	5.25	5.59	4.90	3.67	3.87	3.46	1.58	1.72	1.44
2010.	5.47	5.96	4.96	3.73	4.07	3.37	1.74	1.89	1.59
2009.	5.43	5.86	4.98	3.63	3.89	3.36	1.80	1.96	1.62
2008.	5.66	6.16	5.13	3.81	4.16	3.45	1.84	2.00	1.68
2007.	5.71	6.17	5.23	3.82	4.12	3.51	1.89	2.05	1.72
2006.	5.52	5.99	5.03	3.79	4.07	3.49	1.73	1.92	1.53
2005.	5.81	6.34	5.25	3.92	4.29	3.52	1.89	2.05	1.73
2004.	5.62	6.10	5.12	3.84	4.17	3.49	1.78	1.93	1.63
2003.	5.79	6.32	5.24	3.95	4.24	3.65	1.84	2.08	1.59
2002.	5.64	6.14	5.11	3.80	4.13	3.45	1.84	2.01	1.66
2001.	5.49	5.99	4.97	3.65	4.08	3.21	1.84	1.92	1.76
2000.	5.64	6.04	5.22	3.74	4.01	3.45	1.90	2.02	1.77

See footnotes at end of table.

Table 18. Infant, neonatal, and postneonatal mortality rates, by Hispanic origin and race and sex: United States, 1940, 1950, 1960, 1970, 1980, 1990, 2000–2022—Con.

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

Hispanic origin and race and year	Infant mortality rate			Neonatal mortality rate			Postneonatal mortality rate		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[2,4]									
American Indian and Alaska Native:									
2022.............................	8.16	9.19	7.11	4.86	5.44	4.27	3.30	3.75	2.84
2021.............................	7.46	7.87	7.04	3.71	3.67	3.76	3.75	4.20	3.29
2020.............................	7.31	8.13	6.44	3.73	4.35	3.07	3.58	3.77	3.38
2019.............................	8.05	8.55	7.53	4.11	4.00	4.23	3.94	4.55	3.30
2018.............................	7.87	8.31	7.42	4.02	4.59	3.43	3.85	3.71	3.99
Asian:									
2022.............................	2.85	3.16	2.52	2.00	2.20	1.80	0.84	0.96	0.72
2021.............................	2.94	3.20	2.66	2.26	2.36	2.15	0.68	0.84	0.51
2020.............................	2.35	2.53	2.15	1.69	1.79	1.58	0.66	0.74	0.57
2019.............................	2.63	2.89	2.35	1.91	2.10	1.71	0.72	0.79	0.63
2018.............................	2.91	3.06	2.74	2.08	2.19	1.96	0.83	0.87	0.78
Black:									
2022.............................	11.34	12.42	10.22	6.58	7.20	5.93	4.76	5.23	4.29
2021.............................	10.97	12.00	9.91	6.43	6.91	5.94	4.54	5.10	3.97
2020.............................	10.85	11.75	9.92	6.74	7.28	6.18	4.11	4.47	3.75
2019.............................	11.12	12.00	10.20	7.03	7.62	6.43	4.08	4.38	3.77
2018.............................	11.10	12.35	9.81	7.13	7.93	6.31	3.97	4.42	3.50
Native Hawaiian or Other Pacific Islander:									
2022.............................	8.79	9.35	8.20	4.54	4.01	5.12	4.25	5.34	*
2021.............................	7.24	9.44	4.94	3.78	4.72	*	3.46	4.72	*
2020.............................	6.96	7.11	6.80	4.26	4.47	*	2.70	*	*
2019.............................	7.27	8.56	5.90	3.79	4.97	*	3.48	*	*
2018.............................	8.34	9.39	7.26	4.75	5.43	*	3.59	*	*
White:									
2022.............................	4.39	4.74	4.02	2.85	3.00	2.70	1.53	1.74	1.31
2021.............................	4.20	4.46	3.92	2.73	2.87	2.58	1.47	1.59	1.34
2020.............................	4.29	4.62	3.94	2.84	3.04	2.63	1.45	1.58	1.31
2019.............................	4.37	4.81	3.90	2.88	3.14	2.61	1.48	1.66	1.29
2018.............................	4.55	4.98	4.09	3.02	3.27	2.76	1.53	1.71	1.34

* Estimate does not meet National Center for Health Statistics standards of reliability, see Technical Notes.

[1]Includes race and origin groups not shown separately; see Technical Notes.

[2]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.

[3]Includes persons of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.

[4]Only one race was reported on the birth and death certificates; see Technical Notes. Hispanic origin and race categories are consistent with 1997 OMB standards.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
All causes..	20,553	4,765	210	624	5,800	89	8,075	560.4	508.3	816.5	284.9	1,134.1	879.3	438.7
Certain infectious and parasitic diseases............................(A00–B99,U07.1)[4]	576	126	9	14	194	4	204	15.7	13.4	*	*	37.9	*	11.1
Certain intestinal infectious diseases .... (A00–A08)	11	–	–	1	3	–	6	*	*	*	*	*	*	*
Diarrhea and gastroenteritis of infectious origin......(A09)	135	32	2	1	51	2	39	3.7	3.4	*	*	10.0	*	2.1
Tuberculosis............................. (A16–A19)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Tetanus.................................... (A33,A35)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Diphtheria....................................(A36)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Whooping cough ....(A37)	1	–	–	–	–	–	1	*	*	*	*	*	*	*
Meningococcal infection.......................(A39)	1	–	–	–	1	–	–	*	*	*	*	*	*	*
Septicemia .... (A40–A41)	123	22	1	5	48	2	40	3.4	2.3	*	*	9.4	*	2.2
Congenital syphilis............................(A50)	15	3	1	–	6	–	3	*	*	*	*	*	*	*
Gonococcal infection ....(A54)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Viral diseases ....(A80–B34,U07.1)[4]	269	66	4	5	76	–	110	7.3	7.0	*	*	14.9	*	6.0
Acute poliomyelitis ....(A80)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Varicella (chickenpox)........................(B01)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Measles......................................(B05)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Human immunodeficiency virus (HIV) disease........................... (B20–B24)	1	–	1	–	–	–	–	*	*	*	*	*	*	*
Mumps......................................(B26)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Other and unspecified viral diseases........(A81–B00, B02–B04,B06–B19,B25,B27–B34,U07.1)[4]	268	66	3	5	76	–	110	7.3	7.0	*	*	14.9	*	6.0
Candidiasis..................................(B37)	2	–	–	–	2	–	–	*	*	*	*	*	*	*
Malaria .... (B50–B54)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Pneumocystosis.............................(B59)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
All other and unspecified infectious and parasitic diseases.................... (A20–A32,A38, A42–A49,A51–A53,A55–A79, B35–B36,B38–B49,B55–B58,B60–B99)	19	3	1	2	7	–	5	*	*	*	*	*	*	*
Neoplasms................................. (C00–D48)	72	14	–	4	15	1	37	2.0	*	*	*	*	*	2.0
Malignant neoplasms .... (C00–C97)	40	7	–	3	9	1	19	1.1	*	*	*	*	*	*
Hodgkin disease and non-Hodgkin lymphomas........................ (C81–C85)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Leukemia .... (C91–C95)	14	4	–	–	3	–	7	*	*	*	*	*	*	*
Other and unspecified malignant neoplasms ....(C00–C80,C88,C90,C96–C97)	26	3	–	3	6	1	12	0.7	*	*	*	*	*	*
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior .... (D00–D48)	32	7	–	1	6	–	18	0.9	*	*	*	*	*	*

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism . . . . (D50–D89)	94	25	–	4	29	–	32	2.6	2.7	*	*	5.7	*	1.7
Anemias . . . . (D50–D64)	5	2	–	–	2	–	1	*	*	*	*	*	*	*
Hemorrhagic conditions and other diseases of blood and blood-forming organs . . . . (D65–D76)	68	20	–	2	22	–	22	1.9	2.1	*	*	4.3	*	1.2
Certain disorders involving the immune mechanism . . . . (D80–D89)	21	3	–	2	5	–	9	0.6	*	*	*	*	*	*
Endocrine, nutritional and metabolic diseases . . . . . (E00–E88)	151	40	1	7	31	–	67	4.1	4.3	*	*	6.1	*	3.6
Short stature, not elsewhere classified . . . . (E34.3)	1	–	–	–	–	–	1	*	*	*	*	*	*	*
Nutritional deficiencies . . . . (E40–E64)	13	2	–	–	6	–	5	*	*	*	*	*	*	*
Cystic fibrosis . . . . (E84)	4	–	–	–	1	–	3	*	*	*	*	*	*	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance . . . . (E86–E87)	31	11	–	–	11	–	8	0.8	*	*	*	*	*	*
All other endocrine, nutritional and metabolic diseases . . . . (E00–E32,E34.0–E34.2, E34.4–E34.9,E65–E83,E85,E88)	102	27	1	7	13	–	50	2.8	2.9	*	*	*	*	2.7
Diseases of the nervous system . . . . (G00–G98)	226	50	1	15	57	1	92	6.2	5.3	*	*	11.1	*	5.0
Meningitis . . . . (G00,G03)	43	9	1	4	15	–	11	1.2	*	*	*	*	*	*
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) . . . . (G12.0)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Infantile cerebral palsy . . . . (G80)	1	–	–	–	1	–	–	*	*	*	*	*	*	*
Anoxic brain damage, not elsewhere classified . . . . (G93.1)	31	4	–	–	7	–	18	0.8	*	*	*	*	*	*
Other diseases of nervous system . . . . (G04,G06–G11, G12.1 –G12.9,G20–G72, G81–G92,G93.0,G93.2–G93.9,G95–G98)	151	37	–	11	34	1	63	4.1	3.9	*	*	6.6	*	3.4
Diseases of the ear and mastoid process . . . . (H60–H93)	1	–	–	–	1	–	–	*	*	*	*	*	*	*
Diseases of the circulatory system . . . . (I00–I99)	356	82	3	10	97	2	153	9.7	8.7	*	*	19.0	*	8.3
Pulmonary heart disease and diseases of pulmonary circulation . . . . (I26–I28)	56	12	–	2	17	–	24	1.5	*	*	*	*	*	1.3
Pericarditis, endocarditis and myocarditis . . . . (I30,I33,I40)	7	3	–	–	1	–	3	*	*	*	*	*	*	*
Cardiomyopathy . . . . (I42)	86	27	1	2	18	1	32	2.3	2.9	*	*	*	*	1.7
Cardiac arrest . . . . (I46)	11	1	–	–	5	–	5	*	*	*	*	*	*	*
Cerebrovascular diseases . . . . (I60–I69)	87	21	2	–	26	–	36	2.4	2.2	*	*	5.1	*	2.0
All other diseases of circulatory system . . . . (I00–I25, I31,I34–I38,I44–I45,I47–I51,I70–I99)	109	18	–	6	30	1	53	3.0	*	*	*	5.9	*	2.9
Diseases of the respiratory system . . . . (J00–J98,U04)	387	70	8	12	121	2	154	10.6	7.5	*	*	23.7	*	8.4

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Acute upper respiratory infections . . . . (J00–J06)	9	1	1	–	3	–	3	*	*	*	*	*	*	*
Influenza and pneumonia . . . . (J09–J18)	154	29	4	5	47	2	55	4.2	3.1	*	*	9.2	*	3.0
Influenza . . . . (J09–J11)	12	5	1	1	–	–	4	*	*	*	*	*	*	*
Pneumonia . . . . (J12–J18)	142	24	3	4	47	2	51	3.9	2.6	*	*	9.2	*	2.8
Acute bronchitis and acute bronchiolitis. . . . . (J20–J21)	40	12	–	–	14	–	14	1.1	*	*	*	*	*	*
Bronchitis, chronic and unspecified . . . . (J40–J42)	4	1	1	–	2	–	–	*	*	*	*	*	*	*
Asthma . . . . (J45–J46)	2	–	–	1	–	–	1	*	*	*	*	*	*	*
Pneumonitis due to solids and liquids . . . . (J69)	8	1	–	–	2	–	5	*	*	*	*	*	*	*
Other and unspecified diseases of respiratory system . . . . (J22,J30–J39,J43–J44,J47–J68,J70–J98,U04)	170	26	2	6	53	–	76	4.6	2.8	*	*	10.4	*	4.1
Diseases of the digestive system . . . . (K00–K92)	140	39	2	3	31	–	58	3.8	4.2	*	*	6.1	*	3.2
Gastritis, duodenitis, and noninfective enteritis and colitis . . . . (K29,K50–K55)	31	9	1	3	6	–	10	0.8	*	*	*	*	*	*
Hernia of abdominal cavity and intestinal obstruction without hernia . . . . (K40–K46,K56)	31	10	1	–	7	–	11	0.8	*	*	*	*	*	*
All other and unspecified diseases of digestive system. . . . . (K00–K28,K30–K38,K57–K92)	78	20	–	–	18	–	37	2.1	2.1	*	*	*	*	2.0
Diseases of the genitourinary system . . . . (N00–N95)	54	13	1	3	27	–	10	1.5	*	*	*	5.3	*	*
Renal failure and other disorders of kidney. . . . . (N17–N19,N25,N27)	36	5	1	3	19	–	8	1.0	*	*	*	*	*	*
Other and unspecified diseases of genitourinary system . . . . (N00–N15,N20–N23,N26,N28–N95)	18	8	–	–	8	–	2	*	*	*	*	*	*	*
Certain conditions originating in the perinatal period . . . . (P00–P96)	10,068	2,386	80	362	2,928	40	3,764	274.5	254.5	311.0	165.3	572.5	395.2	204.5
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery. . . . . (P00–P04)	2,224	531	23	98	611	12	805	60.6	56.6	89.4	44.8	119.5	*	43.7
Newborn affected by maternal hypertensive disorders. . . . . (P00.0)	65	11	–	4	18	–	29	1.8	*	*	*	*	*	1.6
Newborn affected by other maternal conditions which may be unrelated to present pregnancy . . . . (P00.1–P00.9)	103	24	1	3	28	1	40	2.8	2.6	*	*	5.5	*	2.2
Newborn affected by maternal complications of pregnancy . . . . (P01)	1,215	305	11	69	346	8	396	33.1	32.5	*	31.5	67.7	*	21.5
Newborn affected by incompetent cervix. . . . . . . (P01.0)	314	85	2	22	103	3	78	8.6	9.1	*	10.0	20.1	*	4.2
Newborn affected by premature rupture of membranes . . . . (P01.1)	641	154	7	42	178	5	206	17.5	16.4	*	19.2	34.8	*	11.2
Newborn affected by multiple pregnancy. . . . . . (P01.5)	69	18	–	2	12	–	35	1.9	*	*	*	*	*	1.9

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Newborn affected by other maternal complications of pregnancy . . . . (P01.2–P01.4,P01.6–P01.9)	191	48	2	3	53	–	77	5.2	5.1	*	*	10.4	*	4.2
Newborn affected by complications of placenta, cord and membranes . . . .(P02)	649	139	8	17	170	2	268	17.7	14.8	*	*	33.2	*	14.6
Newborn affected by complications involving placenta . . . . (P02.0–P02.3)	394	76	6	12	92	–	183	10.7	8.1	*	*	18.0	*	9.9
Newborn affected by complications involving cord. . . . . (P02.4–P02.6)	44	7	–	–	14	–	20	1.2	*	*	*	*	*	1.1
Newborn affected by chorioamnionitis . . . . (P02.7)	210	56	2	5	64	2	64	5.7	6.0	*	*	12.5	*	3.5
Newborn affected by other and unspecified abnormalities of membranes. . . . . (P02.8–P02.9)	1	–	–	–	–	–	1	*	*	*	*	*	*	*
Newborn affected by other complications of labor and delivery . . . .(P03)	158	44	3	5	43	–	56	4.3	4.7	*	*	8.4	*	3.0
Newborn affected by noxious influences transmitted via placenta or breast milk . . . .(P04)	34	8	–	–	6	1	16	0.9	*	*	*	*	*	*
Disorders related to length of gestation and fetal malnutrition . . . . (P05–P08)	2,967	696	17	104	992	11	987	80.9	74.2	*	47.5	194.0	*	53.6
Slow fetal growth and fetal malnutrition . . . .(P05)	83	17	1	3	28	1	30	2.3	*	*	*	5.5	*	1.6
Disorders related to short gestation and low birth weight, not elsewhere classified . . . .(P07)	2,884	679	16	101	964	10	957	78.6	72.4	*	46.1	188.5	*	52.0
Extremely low birth weight or extreme immaturity. . . . . (P07.0,P07.2)	2,213	536	13	80	743	8	706	60.3	57.2	*	36.5	145.3	*	38.4
Other low birth weight or preterm . . . . . . (P07.1,P07.3)	671	143	3	21	221	2	251	18.3	15.3	*	9.6	43.2	*	13.6
Disorders related to long gestation and high birth weight. . . . . (P08)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Birth trauma . . . . (P10–P15)	20	2	–	–	4	–	13	0.5	*	*	*	*	*	*
Intrauterine hypoxia and birth asphyxia . . . . (P20–P21)	362	89	3	10	92	3	148	9.9	9.5	*	*	18.0	*	8.0
Intrauterine hypoxia . . . .(P20)	213	57	1	6	60	2	77	5.8	6.1	*	*	11.7	*	4.2
Birth asphyxia. . . . .(P21)	149	32	2	4	32	1	71	4.1	3.4	*	*	6.3	*	3.9
Respiratory distress of newborn . . . .(P22)	455	95	3	16	136	–	179	12.4	10.1	*	*	26.6	*	9.7
Other respiratory conditions originating in the perinatal period. . . . . (P23–P28)	844	174	10	15	255	–	358	23.0	18.6	*	*	49.9	*	19.4
Congenital pneumonia . . . .(P23)	56	12	–	3	13	–	27	1.5	*	*	*	*	*	1.5
Neonatal aspiration syndromes. . . . .(P24)	46	9	1	3	8	–	24	1.3	*	*	*	*	*	1.3
Interstitial emphysema and related conditions originating in the perinatal period . . . .(P25)	73	17	1	2	19	–	33	2.0	*	*	*	*	*	1.8
Pulmonary hemorrhage originating in the perinatal period. . . . .(P26)	136	28	3	–	49	–	52	3.7	3.0	*	*	9.6	*	2.8

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

	Number							Rate						
			Non-Hispanic, single race[3]							Non-Hispanic, single race[3]				
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Chronic respiratory disease originating in the perinatal period . . . (P27)	170	26	–	3	68	–	62	4.6	2.8	*	*	13.3	*	3.4
Atelectasis . . . (P28.0–P28.1)	283	61	4	3	84	–	121	7.7	6.5	*	*	16.4	*	6.6
All other respiratory conditions originating in the perinatal period . . . (P28.2–P28.9)	80	21	1	1	14	–	39	2.2	2.2	*	*	*	*	2.1
Infections specific to the perinatal period . . . (P35–P39)	808	196	3	36	225	8	306	22.0	20.9	*	16.4	44.0	*	16.6
Bacterial sepsis of newborn . . . (P36)	636	161	2	31	176	8	229	17.3	17.2	*	14.2	34.4	*	12.4
Omphalitis of newborn with or without mild hemorrhage . . . (P38)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
All other infections specific to the perinatal period . . . (P35,P37,P39)	172	35	1	5	49	–	77	4.7	3.7	*	*	9.6	*	4.2
Hemorrhagic and hematological disorders of newborn . . . (P50–P61)	473	120	3	19	99	–	217	12.9	12.8	*	*	19.4	*	11.8
Neonatal hemorrhage . . . (P50–P52,P54)	334	92	1	10	67	–	153	9.1	9.8	*	*	13.1	*	8.3
Hemorrhagic disease of newborn . . . (P53)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice . . . (P55–P59)	11	1	1	–	3	–	4	*	*	*	*	*	*	*
Hematological disorders . . . (P60–P61)	128	27	1	9	29	–	60	3.5	2.9	*	*	5.7	*	3.3
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus . . . (P70.0–P70.2)	12	4	–	1	4	–	3	*	*	*	*	*	*	*
Necrotizing enterocolitis of newborn . . . (P77)	355	91	5	10	112	2	119	9.7	9.7	*	*	21.9	*	6.5
Hydrops fetalis not due to hemolytic disease . . . (P83.2)	171	41	2	8	30	1	82	4.7	4.4	*	*	5.9	*	4.5
Other perinatal conditions . . . (P29,P70.3–P70.9, P71–P76,P78–P81,P83.0–P83.1,P83.3–P83.9,P90–P96)	1,377	347	11	45	368	3	547	37.5	37.0	*	20.5	72.0	*	29.7
Congenital malformations, deformations and chromosomal abnormalities . . . (Q00–Q99)	3,970	1,147	41	124	710	10	1,772	108.2	122.4	159.4	56.6	138.8	*	96.3
Anencephaly and similar malformations . . . (Q00)	275	85	5	6	27	–	137	7.5	9.1	*	*	5.3	*	7.4
Congenital hydrocephalus . . . (Q03)	68	25	1	1	13	1	25	1.9	2.7	*	*	*	*	1.4
Spina bifida . . . (Q05)	12	3	–	–	2	–	5	*	*	*	*	*	*	*
Other congenital malformations of nervous system . . . (Q01–Q02,Q04,Q06–Q07)	270	85	4	5	42	2	117	7.4	9.1	*	*	8.2	*	6.4
Congenital malformations of heart . . . (Q20–Q24)	885	237	5	30	164	3	415	24.1	25.3	*	13.7	32.1	*	22.5
Other congenital malformations of circulatory system . . . (Q25–Q28)	187	52	2	8	33	–	84	5.1	5.5	*	*	6.5	*	4.6
Congenital malformations of respiratory system . . . (Q30–Q34)	175	49	–	5	42	–	75	4.8	5.2	*	*	8.2	*	4.1
Congenital malformations of digestive system . . . (Q35–Q45)	62	17	–	2	12	–	28	1.7	*	*	*	*	*	1.5

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Congenital malformations of genitourinary system . . . . (Q50–Q64)	370	109	4	11	62	2	170	10.1	11.6	*	*	12.1	*	9.2
Congenital malformations and deformations of musculoskeletal system, limbs and integument . . . . (Q65–Q85)	427	118	4	19	87	2	178	11.6	12.6	*	*	17.0	*	9.7
Down syndrome . . . . (Q90)	57	19	–	1	10	–	25	1.6	*	*	*	*	*	1.4
Edward syndrome . . . . (Q91.0–Q91.3)	445	138	3	11	89	–	185	12.1	14.7	*	*	17.4	*	10.1
Patau syndrome . . . . (Q91.4–Q91.7)	192	69	3	4	27	–	84	5.2	7.4	*	*	5.3	*	4.6
Other congenital malformations and deformations . . . . (Q10–Q18,Q86–Q89)	433	113	8	20	76	–	194	11.8	12.1	*	9.1	14.9	*	10.5
Other chromosomal abnormalities, not elsewhere classified . . . . (Q92–Q99)	112	28	2	1	24	–	50	3.1	3.0	*	*	4.7	*	2.7
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R99)	2,691	499	42	38	972	20	981	73.4	53.2	163.3	17.4	190.1	197.6	53.3
Sudden infant death syndrome . . . . (R95)	1,529	262	26	25	568	11	550	41.7	27.9	101.1	11.4	111.1	*	29.9
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified . . . . (R00–R53,R55–R94,R96–R99)	1,162	237	16	13	404	9	431	31.7	25.3	*	*	79.0	*	23.4
All other diseases . . . . (residual)	18	4	–	–	6	–	6	*	*	*	*	*	*	*
External causes of mortality . . . .(*U01,V01–Y84)	1,749	270	22	28	581	9	745	47.7	28.8	85.5	12.8	113.6	*	40.5
Accidents (unintentional injuries) . . . . (V01–X59)	1,354	197	17	24	457	6	580	36.9	21.0	*	11.0	89.4	*	31.5
Transport accidents . . . . (V01–V99)	80	26	2	4	23	–	24	2.2	2.8	*	*	4.5	*	1.3
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)	79	25	2	4	23	–	24	2.2	2.7	*	*	4.5	*	1.3
Other and unspecified transport accidents . . . . (V01,V05–V06,V09.1,V09.3–V09.9,V10–V11, V15–V18,V19.3,V19.8–V19.9,V80.0–V80.2, V80.6–V80.9,V81.2–V81.9,V82.2–V82.9, V87.9,V88.9,V89.1,V89.3,V89.9,V90–V99)	1	1	–	–	–	–	–	*	*	*	*	*	*	*
Falls . . . . (W00–W19)	6	2	–	–	1	–	2	*	*	*	*	*	*	*
Accidental discharge of firearms . . . . (W32–W34)	–	–	–	–	–	–	–	*	*	*	*	*	*	*
Accidental drowning and submersion . . . . . . (W65–W74)	39	8	–	–	7	–	21	1.1	*	*	*	*	*	1.1
Accidental suffocation and strangulation in bed . . . . (W75)	1,040	137	12	17	375	6	435	28.4	14.6	*	*	73.3	*	23.6
Other accidental suffocation and strangulation . . . . (W76–W77,W81–W84)	67	9	–	–	15	–	40	1.8	*	*	*	*	*	2.2

See footnotes at end of table.

Table 19. Number of infant deaths and infant mortality rate for 130 selected causes, by Hispanic origin and race: United States, 2022—Con.

[Rates are infant deaths (younger than 1) per 100,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Asterisks (*) preceding cause-of-death codes indicate that they are not part of the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision* (ICD–10); see Technical Notes]

| | Number | | | | | | | Rate | | | | | | |
| | | | Non-Hispanic, single race[3] | | | | | | | Non-Hispanic, single race[3] | | | | |
Cause of death (based on ICD–10)	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	Total[1]	Hispanic[2]	American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract . . . . (W78–W80)	39	6	–	1	13	–	15	1.1	*	*	*	*	*	*
Accidents caused by exposure to smoke, fire and flames. . . . . (X00–X09)	15	2	1	–	2	–	10	*	*	*	*	*	*	*
Accidental poisoning and exposure to noxious substances . . . . (X40–X49)	28	2	1	–	8	–	16	0.8	*	*	*	*	*	*
Other and unspecified accidents . . . . (W20–W31, W35–W64,W85–W99,X10–X39,X50–X59)	40	5	1	2	13	–	17	1.1	*	*	*	*	*	*
Assault (homicide) . . . . (*U01,X85–Y09)	252	50	3	3	80	1	98	6.9	5.3	*	*	15.6	*	5.3
Assault (homicide) by hanging, strangulation and suffocation . . . . (X91)	11	2	–	–	1	–	7	*	*	*	*	*	*	*
Assault (homicide) by discharge of firearms . . . . (*U01.4,X93–X95)	16	5	–	1	6	–	2	*	*	*	*	*	*	*
Neglect, abandonment and other maltreatment syndromes . . . . (Y06–Y07)	55	9	–	1	15	–	26	1.5	*	*	*	*	*	1.4
Assault (homicide) by other and unspecified means . . . . (*U01.0–*U01.3,*U01.5–*U01.9, X85–X90,X92,X96–X99,Y00–Y05,Y08–Y09)	170	34	3	1	58	1	63	4.6	3.6	*	*	11.3	*	3.4
Complications of medical and surgical care . . . . (Y40–Y84)	20	4	–	1	6	1	8	0.5	*	*	*	*	*	*
Other external causes . . . . (Y10–Y36)	123	19	2	–	38	1	59	3.4	*	*	*	7.4	*	3.2

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
– Quantity zero.
[1]Includes race and origin groups not shown separately; see Technical Notes.
[2]Includes people of Hispanic origin of any race; see Technical Notes.
[3]Only one race was reported on the death certificate.
[4]Beginning with data year 2020, COVID-19 (ICD–10 code U07.1) was newly added as a cause of death.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 20. Number of infant deaths and infant mortality rate, by Hispanic origin and race for the United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, and by sex for the United States: 2022

[Rates are infant (younger than 1) deaths per 1,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards; see Technical Notes]

					Non-Hispanic, single race[3]									
					American Indian and Alaska Native		Asian		Black		Native Hawaiian or Other Pacific Islander		White	
	Total[1]		Hispanic[2]											
Area and sex	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
United States[4]	20,553	5.60	4,765	5.08	210	8.16	624	2.85	5,800	11.34	89	8.79	8,075	4.39
Male	11,371	6.07	2,612	5.47	120	9.19	356	3.16	3,230	12.42	49	9.35	4,469	4.74
Female	9,182	5.12	2,153	4.68	90	7.11	268	2.52	2,570	10.22	40	8.20	3,606	4.02
Alabama..............	386	6.64	28	4.49	2	*	1	*	201	12.51	1	*	144	4.27
Alaska	62	6.62	5	*	19	*	3	*	2	*	2	*	24	5.17
Arizona..............	486	6.19	219	6.29	30	8.73	13	*	45	10.17	2	*	141	4.62
Arkansas	270	7.61	21	4.97	–	*	2	*	78	12.38	5	*	153	6.79
California	1,697	4.05	907	4.46	10	*	136	2.39	191	9.53	17	*	330	2.99
Colorado	286	4.58	108	5.69	2	*	10	*	29	9.73	1	*	106	3.02
Connecticut	153	4.33	61	6.36	–	*	6	*	36	8.38	–	*	40	2.14
Delaware	78	7.21	11	*	–	*	6	*	41	14.37	–	*	17	*
District of Columbia	39	4.83	3	*	–	*	–	*	28	8.01	–	*	4	*
Florida	1,341	5.98	373	4.98	2	*	13	*	512	10.75	–	*	402	4.38
Georgia	894	7.09	115	5.42	–	*	24	4.26	469	11.16	2	*	272	5.07
Hawaii	88	5.66	27	10.00	–	*	14	*	–	*	10	*	6	*
Idaho	117	5.23	21	5.25	3	*	1	*	3	*	1	*	84	4.97
Illinois	715	5.57	146	4.91	–	*	22	2.66	242	12.54	–	*	273	4.01
Indiana..............	574	7.21	78	7.85	–	*	10	*	150	14.82	–	*	313	5.67
Iowa................	193	5.29	24	5.75	2	*	3	*	32	12.49	3	*	120	4.36
Kansas	207	6.02	50	7.93	1	*	6	*	21	9.51	–	*	117	4.94
Kentucky	302	5.77	25	5.83	–	*	1	*	49	9.72	2	*	216	5.34
Louisiana	414	7.33	29	4.89	2	*	–	*	242	11.96	–	*	134	4.77
Maine...............	79	6.53	1	*	–	*	–	*	11	*	–	*	61	5.73
Maryland	422	6.14	80	5.56	–	*	26	5.80	213	10.42	–	*	90	3.29
Massachusetts.........	227	3.31	62	4.03	–	*	7	*	41	5.75	–	*	113	3.00
Michigan	650	6.35	46	6.45	3	*	21	5.26	238	13.81	–	*	306	4.35
Minnesota	289	4.51	24	3.97	6	*	15	*	82	10.35	–	*	142	3.36
Mississippi...........	318	9.17	9	*	4	*	2	*	174	12.40	–	*	124	7.00
Missouri.............	460	6.67	31	5.93	–	*	3	*	125	13.60	5	*	278	5.58
Montana.............	53	4.74	4	*	7	*	–	*	1	*	–	*	37	4.11
Nebraska	142	5.83	18	*	1	*	3	*	25	15.65	1	*	89	5.52
Nevada..............	153	4.61	56	4.30	2	*	5	*	37	8.54	2	*	38	3.47
New Hampshire	43	3.56	5	*	–	*	–	*	1	*	–	*	36	3.49
New Jersey	371	3.61	112	3.74	1	*	23	2.18	117	9.06	–	*	109	2.30
New Mexico...........	123	5.69	84	6.66	11	*	1	*	2	*	–	*	20	3.62
New York	884	4.25	202	4.03	4	*	45	2.18	225	8.05	–	*	334	3.21
North Carolina	826	6.79	120	5.32	12	*	16	*	339	12.85	1	*	300	4.78
North Dakota	44	4.60	2	*	3	*	2	*	6	*	–	*	25	3.59
Ohio................	914	7.13	65	7.17	–	*	10	*	313	15.36	4	*	488	5.38
Oklahoma............	333	6.89	61	7.21	24	5.51	9	*	50	13.55	2	*	144	5.49
Oregon..............	177	4.48	49	5.76	8	*	5	*	7	*	2	*	98	4.25
Pennsylvania	742	5.70	109	6.02	–	*	25	4.02	189	11.37	3	*	369	4.34
Rhode Island	39	3.80	19	*	–	*	3	*	3	*	–	*	9	*

See footnotes at end of table.

Table 20. Number of infant deaths and infant mortality rate, by Hispanic origin and race for the United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, and by sex for the United States: 2022—Con.

[Rates are infant (younger than 1) deaths per 1,000 live births in specified group. Infant deaths are based on Hispanic origin and race of decedent; live births are based on Hispanic origin and race of mother; see Technical Notes in this report. Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards; see Technical Notes]

					Non-Hispanic, single race[3]									
					American Indian and Alaska Native		Asian		Black		Native Hawaiian or Other Pacific Islander		White	
	Total[1]		Hispanic[2]											
Area and sex	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
South Carolina	390	6.75	30	4.24	1	*	3	*	191	12.46	1	*	149	4.61
South Dakota	87	7.77	5	*	30	20.51	–	*	2	*	–	*	47	5.87
Tennessee	541	6.58	48	4.34	–	*	2	*	166	11.44	1	*	299	5.66
Texas	2,243	5.76	963	5.04	3	*	60	2.89	527	11.02	2	*	645	5.29
Utah	224	4.89	52	5.83	1	*	2	*	11	*	5	*	143	4.41
Vermont	25	4.70	3	*	–	*	–	*	1	*	–	*	19	*
Virginia	586	6.13	95	5.96	1	*	26	3.64	217	11.70	-	*	200	3.92
Washington	360	4.32	99	5.76	9	*	24	2.62	34	8.95	13	*	141	3.20
West Virginia	127	7.50	5	*	–	*	–	*	10	*	–	*	108	7.06
Wisconsin	344	5.73	49	7.03	5	*	14	*	71	12.48	1	*	192	4.52
Wyoming	35	5.79	6	*	1	*	1	*	–	*	–	*	26	5.63
Puerto Rico	143	7.48	141	7.54	–	*	–	*	–	*	–	*	2	*
U.S. Virgin Islands	6	*	2	*	–	*	–	*	2	*	–	*	1	*
Guam	27	10.72	2	*	–	*	2	*	–	*	19	*	–	*
American Samoa	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Northern Marianas	6	*	–	*	–	*	1	*	–	*	5	*	–	*

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.
– Quantity zero.
--- Data not available.
[1]Includes race and origin groups not shown separately; see Technical Notes.
[2]Includes people of Hispanic origin of any race; see Technical Notes.
[3]Only one race was reported on the death certificate; see Technical Notes.
[4]Excludes data for Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 21. Number of maternal deaths and maternal mortality rate for selected causes, by Hispanic origin and race: United States, 2022

[Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes in this report]

Cause of death (based on *International Classification of Diseases, 10th Revision*)	Total[1]	Hispanic[2]	Non-Hispanic, single race[3]				
			American Indian and Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White
			Number				
Maternal causes . . . . (A34,O00–O95,O98–O99)	817	158	12	29	253	4	350
Direct obstetric causes . . . . (A34, O00–O95)	394	92	8	17	125	3	143
Pregnancy with abortive outcome . . . . (O00–O07)	33	7	2	1	11	1	11
Ectopic pregnancy . . . . (O00)	23	5	1	–	8	1	8
Spontaneous abortion . . . . (O03)	5	–	1	1	1	–	2
Medical abortion . . . . (O04)	–	–	–	–	–	–	–
Other abortion . . . . (O05)	–	–	–	–	–	–	–
Other and unspecified pregnancy with abortive outcome . . . . (O01–O02,O06–O07)	5	2	–	–	2	–	1
Other direct obstetric causes . . . . (A34,O10–O92)	353	82	6	16	112	2	129
Eclampsia and pre–eclampsia . . . . (O11,O13–O16)	37	10	–	2	11	–	13
Hemorrhage of pregnancy and childbirth and placenta previa . . . . (O20,O44–O46,O67,O72)	34	7	1	3	10	–	12
Complications predominantly related to the puerperium . . . . (A34,O85–O92)	77	18	–	3	29	2	24
Obstetrical tetanus . . . . (A34)	–	–	–	–	–	–	–
Obstetric embolism . . . . (O88)	40	7	–	3	14	2	13
Other complications predominantly related to the puerperium . . . . (O85–O87,O89–O92)	37	11	–	–	15	–	11
All other direct obstetric causes . . . . (O10,O12, O21–O43,O47–O66,O68–O71,O73–O75)	205	47	5	8	62	–	80
Obstetric death of unspecified cause . . . . (O95)	8	3	–	–	2	–	3
Indirect obstetric causes . . . . (O98–O99)	423	66	4	12	128	1	207
Death from any obstetric cause occurring more than 42 days but less than 1 year after delivery . . . . (O96)[4]	428	68	14	17	129	1	197
			Rate per 100,000 live births				
Maternal causes . . . . (A34,O00–O95,O98–O99)	22.3	16.9	*	13.2	49.5	*	19.0
Direct obstetric causes . . . . (A34, O00–O95)	10.7	9.8	*	*	24.4	*	7.8
Pregnancy with abortive outcome . . . . (O00–O07)	0.9	*	*	*	*	*	*
Ectopic pregnancy . . . . (O00)	0.6	*	*	*	*	*	*
Spontaneous abortion . . . . (O03)	*	*	*	*	*	*	*
Medical abortion . . . . (O04)	*	*	*	*	*	*	*
Other abortion . . . . (O05)	*	*	*	*	*	*	*
Other and unspecified pregnancy with abortive outcome . . . . (O01–O02,O06–O07)	*	*	*	*	*	*	*
Other direct obstetric causes . . . . (A34,O10–O92)	9.6	8.7	*	*	21.9	*	7.0
Eclampsia and pre–eclampsia . . . . (O11,O13–O16)	1.0	*	*	*	*	*	*
Hemorrhage of pregnancy and childbirth and placenta previa . . . . (O20,O44–O46,O67,O72)	0.9	*	*	*	*	*	*
Complications predominantly related to the puerperium . . . . (A34,O85–O92)	2.1	*	*	*	5.7	*	1.3
Obstetrical tetanus . . . . (A34)	*	*	*	*	*	*	*
Obstetric embolism . . . . (O88)	1.1	*	*	*	*	*	*
Other complications predominantly related to the puerperium . . . . (O85–O87,O89–O92)	1.0	*	*	*	*	*	*
All other direct obstetric causes . . . . (O10,O12, O21–O43,O47–O66,O68–O71,O73–O75)	5.6	5.0	*	*	12.1	*	4.3
Obstetric death of unspecified cause . . . . (O95)	*	*	*	*	*	*	*
Indirect obstetric causes . . . . (O98–O99)	11.5	7.0	*	*	25.0	*	11.2
Death from any obstetric cause occurring more than 42 days but less than 1 year after delivery . . . . (O96)[4]	11.7	7.3	*	*	25.2	*	10.7

See footnotes at end of table.

Table 21. Number of maternal deaths and maternal mortality rate for selected causes, by Hispanic origin and race: United States, 2022—Con.

[Hispanic-origin and race categories are consistent with 1997 Office of Management and Budget standards. Data for specified categories other than Black non-Hispanic, single race and White non-Hispanic, single race should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes in this report]

– Quantity zero.

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes.

[1]Includes deaths with origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.

[2]Includes people of Hispanic origin of any race; see Technical Notes.

[3]Only one race was reported on the death certificate; see Technical Notes.

[4]Late maternal death.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 22. Number of deaths, death rate, and age-adjusted death rate for dementia-related causes, by Hispanic origin and race and sex: United States, 1999–2022

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022.	292,881	97,470	195,411	87.9	59.0	116.3	70.4	59.7	76.8
2021.	279,704	92,303	187,401	84.3	56.2	111.9	72.4	59.7	80.2
2020.	303,984	99,157	204,827	92.3	61.1	122.5	73.3	60.5	81.1
2019.	271,872	90,482	181,390	82.8	56.0	108.9	66.6	56.6	72.6
2018.	266,957	87,759	179,198	81.6	54.5	107.9	66.6	56.4	72.5
2017.	261,914	85,129	176,785	80.4	53.1	106.9	66.7	56.4	72.7
2016.	249,605	80,680	168,925	77.2	50.7	103.0	64.9	55.1	70.5
2015.	245,926	79,113	166,813	76.5	50.0	102.2	65.2	55.4	70.7
2014.	239,753	76,911	162,842	75.2	49.0	100.6	64.9	55.5	70.2
2013.	234,242	74,656	159,586	74.1	48.0	99.4	64.8	55.4	69.8
2012.	223,404	71,158	152,246	71.2	46.1	95.5	63.3	54.7	68.0
2011.	212,876	67,053	145,823	68.3	43.7	92.1	61.8	53.1	66.3
2010.	196,371	61,961	134,410	63.6	40.8	85.6	58.8	51.1	62.8
2009.	177,523	55,553	121,970	57.9	36.8	78.2	54.2	46.8	57.9
2008.	178,960	54,893	124,067	58.9	36.7	80.2	55.9	47.5	60.1
2007.	156,042	47,537	108,505	51.8	32.1	70.8	49.8	42.4	53.5
2006.	151,432	45,937	105,495	50.8	31.3	69.5	49.5	42.2	52.9
2005.	129,573	38,024	91,549	43.8	26.2	60.9	43.4	36.1	46.9
2004.	114,271	33,467	80,804	39.0	23.3	54.2	39.1	32.7	42.3
2003.	110,569	32,246	78,323	38.1	22.6	53.0	38.4	32.1	41.4
2002.	102,105	29,891	72,214	35.5	21.2	49.3	36.1	30.6	38.6
2001.	92,514	27,315	65,199	32.5	19.5	44.9	33.1	28.5	35.2
2000.	83,694	24,568	59,126	29.7	17.8	41.2	30.5	26.1	32.4
1999.	74,386	22,380	52,006	26.7	16.4	36.6	27.5	24.2	28.9
Hispanic[4]									
2022.	19,213	6,209	13,004	30.2	19.2	41.4	54.3	45.7	59.2
2021.	17,876	5,815	12,061	28.5	18.3	39.0	53.8	44.2	59.6
2020.	18,534	6,151	12,383	30.2	19.9	40.7	54.3	46.1	59.3
2019.	15,412	5,243	10,169	25.4	17.2	33.9	47.3	41.2	50.9
2018.	14,937	5,181	9,756	24.9	17.1	32.9	47.4	42.1	50.3
2017.	13,820	4,634	9,186	23.4	15.6	31.5	46.0	39.7	49.8
2016.	12,687	4,278	8,409	22.1	14.7	29.6	44.8	38.9	48.3
2015.	12,104	4,111	7,993	21.4	14.4	28.6	45.2	39.5	48.5
2014.	11,583	3,987	7,596	20.9	14.2	27.8	46.3	41.2	49.3
2013.	10,767	3,588	7,179	19.9	13.1	27.0	46.2	39.8	49.7
2012.	9,943	3,411	6,532	18.8	12.7	25.0	45.7	40.6	48.4
2011.	8,793	2,995	5,798	16.9	11.3	22.6	43.1	38.2	45.9
2010.	7,744	2,717	5,027	15.3	10.6	20.2	41.7	38.2	43.5
2009.	6,535	2,203	4,332	13.2	8.8	17.9	36.7	32.2	39.2
2008.	6,378	2,127	4,251	13.3	8.7	18.1	38.2	32.8	40.9
2007.	5,198	1,774	3,424	11.3	7.5	15.1	33.0	29.7	34.7
2006.	5,076	1,757	3,319	11.4	7.7	15.2	33.9	30.6	35.4
2005.	3,876	1,356	2,520	9.0	6.2	12.0	27.6	25.5	28.5
2004.	3,244	1,059	2,185	7.8	5.0	10.8	24.5	21.2	26.2
2003.	3,001	1,032	1,969	7.5	5.0	10.1	23.8	21.8	24.7
2002.	2,461	840	1,621	6.4	4.2	8.6	20.7	19.0	21.5
2001.	2,184	736	1,448	5.9	3.9	8.0	19.1	17.0	20.1
2000.	1,867	671	1,196	5.3	3.7	7.0	17.2	16.0	17.6
1999.	1,677	563	1,114	4.9	3.2	6.8	16.4	14.8	17.2

See footnotes at end of table.

Table 22. Number of deaths, death rate, and age-adjusted death rate for dementia-related causes, by Hispanic origin and race and sex: United States, 1999–2022—Con.

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[5]									
American Indian and Alaska Native:									
2022..........................	897	300	597	37.1	25.1	48.8	39.8	31.5	45.5
2021..........................	874	264	610	35.6	21.8	49.1	43.0	30.0	51.6
2020..........................	864	278	586	35.5	23.3	47.4	43.0	32.6	49.9
2019..........................	733	254	479	30.1	21.2	38.7	39.2	32.3	43.3
2018..........................	764	270	494	31.6	22.7	40.2	42.7	36.2	46.5
Asian:									
2022..........................	7,591	2,463	5,128	37.4	25.2	48.8	36.1	30.0	39.8
2021..........................	6,793	2,189	4,604	34.5	23.2	45.0	35.9	29.1	40.2
2020..........................	7,120	2,288	4,832	36.8	24.7	47.8	36.8	30.0	41.1
2019..........................	5,931	1,932	3,999	31.4	21.4	40.4	32.6	27.0	35.9
2018..........................	5,529	1,799	3,730	29.5	20.2	38.0	32.3	26.8	35.6
Black:									
2022..........................	23,599	7,687	15,912	56.1	38.0	72.8	67.8	62.5	69.9
2021..........................	23,685	7,506	16,179	56.6	37.3	74.4	71.8	62.7	75.9
2020..........................	25,815	8,213	17,602	62.3	41.5	81.4	74.7	66.4	78.2
2019..........................	21,629	7,067	14,562	52.6	35.9	67.8	64.5	59.6	66.3
2018..........................	21,037	6,743	14,294	51.4	34.5	67.0	64.8	59.1	67.0
Native Hawaiian or Other Pacific Islander:									
2022..........................	202	70	132	31.8	21.8	42.0	42.5	31.9	50.2
2021..........................	170	61	109	27.1	19.3	35.2	39.9	32.0	45.3
2020..........................	171	71	100	27.9	23.0	32.9	40.3	37.4	42.1
2019..........................	147	64	83	24.7	21.3	28.0	38.1	36.9	38.7
2018..........................	126	50	76	21.5	16.9	26.1	35.5	31.2	38.3
White:									
2022..........................	240,132	80,270	159,862	122.4	82.3	162.0	75.2	63.4	82.6
2021..........................	229,199	76,082	153,117	116.4	77.9	154.5	77.4	63.5	86.3
2020..........................	250,280	81,744	168,536	127.2	84.2	169.0	77.8	63.7	86.8
2019..........................	226,969	75,549	151,420	115.0	77.6	151.4	71.2	59.9	78.1
2018..........................	223,473	73,273	150,200	113.1	75.2	150.0	70.9	59.4	77.8

[1]Rates are on an annual basis per 100,000 population in specified group; see Technical Notes in this report.
[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.
[3]Includes origins and races not shown separately; see Technical Notes.
[4]Includes people of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.
[5]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.

NOTE: Causes of death attributable to dementia-related mortality include *International Classification of Diseases, 10th Revision* codes F01 (Vascular dementia), F03 (Unspecified dementia), G30 (Alzheimer disease), and G31 (Other degenerative diseases of nervous system, not elsewhere classified).

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 23. Number of deaths, death rate, and age-adjusted death rate for drug-induced causes, by Hispanic origin and race and sex: United States, 1999–2022

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022.	112,109	78,614	33,495	33.6	47.6	19.9	33.8	47.2	20.2
2021.	111,219	77,309	33,910	33.5	47.0	20.2	33.6	46.8	20.4
2020.	96,096	66,607	29,489	29.2	41.1	17.6	29.5	41.1	17.9
2019.	74,511	50,393	24,118	22.7	31.2	14.5	22.8	31.1	14.5
2018.	71,147	47,338	23,809	21.7	29.4	14.3	21.8	29.3	14.3
2017.	73,990	48,967	25,023	22.7	30.5	15.1	22.8	30.5	15.2
2016.	67,265	43,931	23,334	20.8	27.6	14.2	20.8	27.6	14.2
2015.	55,403	34,815	20,588	17.2	22.0	12.6	17.2	21.9	12.5
2014.	49,714	30,510	19,204	15.6	19.4	11.9	15.5	19.3	11.7
2013.	46,471	28,381	18,090	14.7	18.2	11.3	14.6	18.0	11.1
2012.	43,819	26,594	17,225	14.0	17.2	10.8	13.8	17.0	10.7
2011.	43,544	26,444	17,100	14.0	17.3	10.8	13.9	17.0	10.7
2010.	40,393	24,376	16,017	13.1	16.1	10.2	12.9	15.9	10.0
2009.	39,147	24,015	15,132	12.8	15.9	9.7	12.6	15.7	9.5
2008.	38,649	23,928	14,721	12.7	16.0	9.5	12.6	15.8	9.4
2007.	38,371	23,883	14,488	12.7	16.1	9.5	12.6	16.0	9.3
2006.	38,396	24,507	13,889	12.9	16.7	9.2	12.8	16.6	9.1
2005.	33,541	21,208	12,333	11.3	14.6	8.2	11.3	14.5	8.1
2004.	30,711	19,362	11,349	10.5	13.5	7.6	10.5	13.4	7.6
2003.	28,723	18,426	10,297	9.9	12.9	7.0	9.9	12.9	7.0
2002.	26,040	16,734	9,306	9.1	11.8	6.4	9.1	11.8	6.3
2001.	21,705	14,253	7,452	7.6	10.2	5.1	7.6	10.1	5.1
2000.	19,720	13,137	6,583	7.0	9.5	4.6	7.0	9.5	4.6
1999.	19,128	12,885	6,243	6.9	9.4	4.4	6.8	9.4	4.4
Hispanic[4]									
2022.	14,573	11,563	3,010	22.9	35.8	9.6	23.4	36.3	9.9
2021.	13,436	10,513	2,923	21.4	33.1	9.5	21.9	33.5	9.7
2020.	11,059	8,725	2,334	18.0	28.2	7.7	18.4	28.5	7.9
2019.	7,837	6,106	1,731	12.9	20.0	5.8	13.4	20.5	6.0
2018.	6,663	5,087	1,576	11.1	16.8	5.3	11.6	17.5	5.6
2017.	6,322	4,797	1,525	10.7	16.1	5.2	11.2	16.8	5.5
2016.	5,540	4,130	1,410	9.6	14.2	5.0	10.1	14.8	5.3
2015.	4,387	3,175	1,212	7.8	11.1	4.3	8.2	11.7	4.7
2014.	3,790	2,687	1,103	6.8	9.6	4.0	7.3	10.3	4.4
2013.	3,616	2,546	1,070	6.7	9.3	4.0	7.3	10.0	4.4
2012.	3,272	2,283	989	6.2	8.5	3.8	6.8	9.3	4.2
2011.	3,152	2,175	977	6.1	8.2	3.8	6.6	8.9	4.3
2010.	2,788	1,944	844	5.5	7.6	3.4	6.1	8.4	3.8
2009.	2,811	2,013	798	5.7	8.0	3.3	6.4	8.9	3.7
2008.	2,761	2,033	728	5.8	8.4	3.1	6.4	9.3	3.5
2007.	2,723	2,045	678	5.9	8.7	3.0	6.6	9.7	3.4
2006.	2,871	2,135	736	6.4	9.4	3.4	7.3	10.6	3.9
2005.	2,596	1,969	627	6.0	9.0	3.0	6.9	10.2	3.5
2004.	2,257	1,671	586	5.4	7.9	2.9	6.3	9.1	3.4
2003.	2,358	1,800	558	5.9	8.8	2.9	6.7	10.1	3.3
2002.	2,137	1,647	490	5.5	8.3	2.6	6.3	9.5	3.0
2001.	1,731	1,335	396	4.7	7.0	2.2	5.3	8.0	2.5
2000.	1,700	1,348	352	4.8	7.4	2.1	5.4	8.3	2.4
1999.	1,965	1,605	360	5.8	9.2	2.2	6.4	10.3	2.5

See footnotes at end of table.

Table 23. Number of deaths, death rate, and age-adjusted death rate for drug-induced causes, by Hispanic origin and race and sex: United States, 1999–2022—Con.

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[5]									
American Indian and Alaska Native:									
2022	1,641	1,040	601	67.8	86.9	49.1	69.5	88.8	50.3
2021	1,448	876	572	59.1	72.4	46.1	60.4	73.8	47.0
2020	1,076	642	434	44.2	53.7	35.1	45.1	54.2	36.4
2019	785	465	320	32.2	38.8	25.9	33.0	40.0	26.2
2018	680	407	273	28.1	34.2	22.2	29.2	35.5	23.1
Asian:									
2022	1,184	909	275	5.8	9.3	2.6	5.5	8.7	2.5
2021	1,017	757	260	5.2	8.0	2.5	4.9	7.6	2.4
2020	990	753	237	5.1	8.1	2.3	4.9	7.7	2.2
2019	713	530	183	3.8	5.9	1.8	3.5	5.5	1.7
2018	634	441	193	3.4	4.9	2.0	3.1	4.6	1.8
Black:									
2022	21,455	15,749	5,706	51.0	77.9	26.1	49.2	75.7	25.3
2021	19,944	14,457	5,487	47.6	71.8	25.2	45.8	69.8	24.4
2020	15,936	11,560	4,376	38.5	58.4	20.2	37.3	57.3	19.7
2019	11,115	7,968	3,147	27.0	40.5	14.7	26.1	39.9	14.2
2018	9,632	6,883	2,749	23.5	35.2	12.9	22.7	34.6	12.3
Native Hawaiian or Other Pacific Islander:									
2022	137	104	33	21.5	32.3	10.5	20.7	30.9	10.2
2021	137	106	31	21.9	33.5	10.0	21.6	32.7	10.2
2020	91	70	21	14.8	22.6	6.9	14.6	22.1	6.9
2019	66	48	18	11.1	16.0	*	10.8	15.4	6.1
2018	76	56	20	13.0	19.0	6.9	13.1	19.0	7.1
White:									
2022	70,734	47,595	23,139	36.0	48.8	23.4	36.9	49.2	24.2
2021	73,225	49,176	24,049	37.2	50.3	24.3	38.2	51.2	24.9
2020	65,270	43,689	21,581	33.2	45.0	21.6	34.5	46.3	22.5
2019	52,796	34,490	18,306	26.8	35.4	18.3	27.4	36.1	18.7
2018	52,322	33,679	18,643	26.5	34.6	18.6	27.2	35.3	19.0

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes in this report.
[1]Rates are on an annual basis per 100,000 population in specified group; see Technical Notes.
[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.
[3]Includes origins and races not shown separately; see Technical Notes.
[4]Includes people of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.
[5]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.

NOTE: Causes of death attributable to drug-induced mortality include *International Classification of Diseases, 10th Revision* codes D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, 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, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2–J70.4, K85.3, L10.5, L27.0–L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1–R78.5, X40–X44, X60–X64, X85, and Y10–Y14.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 24. Number of deaths, death rate, and age-adjusted death rate for alcohol-induced causes, by Hispanic origin and race and sex: United States, 1999–2022

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022	51,191	36,426	14,765	15.4	22.0	8.8	13.5	19.5	7.8
2021	54,258	38,700	15,558	16.3	23.5	9.3	14.4	20.9	8.3
2020	49,061	35,002	14,059	14.9	21.6	8.4	13.1	19.2	7.5
2019	39,043	27,921	11,122	11.9	17.3	6.7	10.4	15.2	5.9
2018	37,329	26,820	10,509	11.4	16.6	6.3	9.9	14.7	5.6
2017	35,823	25,911	9,912	11.0	16.2	6.0	9.6	14.3	5.3
2016	34,865	25,221	9,644	10.8	15.9	5.9	9.5	14.1	5.2
2015	33,171	23,996	9,175	10.3	15.2	5.6	9.1	13.6	5.0
2014	30,722	22,389	8,333	9.6	14.3	5.1	8.5	12.9	4.6
2013	29,001	21,361	7,640	9.2	13.7	4.8	8.2	12.5	4.3
2012	27,762	20,418	7,344	8.8	13.2	4.6	8.0	12.1	4.2
2011	26,654	19,492	7,162	8.6	12.7	4.5	7.7	11.7	4.1
2010	25,692	19,038	6,654	8.3	12.5	4.2	7.6	11.7	3.9
2009	24,518	18,088	6,430	8.0	12.0	4.1	7.4	11.3	3.8
2008	24,189	18,152	6,037	8.0	12.1	3.9	7.4	11.5	3.6
2007	23,199	17,428	5,771	7.7	11.8	3.8	7.2	11.3	3.5
2006	22,073	16,472	5,601	7.4	11.2	3.7	7.0	10.9	3.4
2005	21,634	16,238	5,396	7.3	11.2	3.6	7.0	11.0	3.4
2004	21,081	15,906	5,175	7.2	11.1	3.5	7.0	11.0	3.3
2003	20,687	15,630	5,057	7.1	11.0	3.4	7.0	11.0	3.3
2002	20,218	15,272	4,946	7.0	10.8	3.4	6.9	11.0	3.3
2001	20,114	15,149	4,965	7.1	10.8	3.4	7.0	11.2	3.3
2000	19,643	14,993	4,650	7.0	10.9	3.2	7.0	11.4	3.2
1999	19,469	14,894	4,575	7.0	10.9	3.2	7.1	11.5	3.2
Hispanic[4]									
2022	7,467	6,028	1,439	11.7	18.7	4.6	13.2	21.5	5.1
2021	7,533	6,148	1,385	12.0	19.4	4.5	13.6	22.4	4.9
2020	6,737	5,448	1,289	11.0	17.6	4.2	12.6	20.9	4.7
2019	5,458	4,442	1,016	9.0	14.5	3.4	10.6	17.8	3.8
2018	4,969	4,109	860	8.3	13.6	2.9	9.9	17.1	3.3
2017	4,817	3,934	883	8.2	13.2	3.0	9.9	16.9	3.5
2016	4,711	3,814	897	8.2	13.1	3.2	10.1	17.2	3.7
2015	4,474	3,643	831	7.9	12.7	3.0	9.9	16.9	3.5
2014	4,127	3,393	734	7.5	12.1	2.7	9.5	16.4	3.3
2013	3,698	3,034	664	6.8	11.0	2.5	9.0	15.3	3.1
2012	3,513	2,903	610	6.6	10.8	2.3	8.8	15.2	3.0
2011	3,445	2,842	603	6.6	10.7	2.4	9.0	15.6	3.0
2010	3,326	2,759	567	6.6	10.8	2.3	9.1	16.0	3.0
2009	3,139	2,618	521	6.4	10.4	2.1	8.9	15.6	2.9
2008	3,021	2,522	499	6.3	10.4	2.1	8.9	15.5	2.8
2007	2,977	2,539	438	6.4	10.8	1.9	9.4	16.8	2.7
2006	2,804	2,341	463	6.3	10.3	2.1	9.2	16.2	3.0
2005	2,658	2,265	393	6.2	10.3	1.9	9.1	16.5	2.6
2004	2,406	2,056	350	5.8	9.7	1.7	8.6	15.4	2.5
2003	2,422	2,048	374	6.0	10.0	1.9	9.2	16.4	2.8
2002	2,408	2,065	343	6.2	10.4	1.8	9.7	17.4	2.7
2001	2,381	2,026	355	6.4	10.6	2.0	10.1	18.2	2.9
2000	2,323	2,024	299	6.6	11.1	1.7	10.5	19.4	2.6
1999	2,184	1,864	320	6.4	10.7	1.9	10.3	18.6	3.0

See footnotes at end of table.

Table 24. Number of deaths, death rate, and age-adjusted death rate for alcohol-induced causes, by Hispanic origin and race and sex: United States, 1999–2022—Con.

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[5]									
American Indian and Alaska Native:									
2022.........................	1,904	1,180	724	78.6	98.5	59.2	78.4	98.4	59.4
2021.........................	2,221	1,377	844	90.6	113.8	68.0	91.7	116.0	68.7
2020.........................	1,776	1,042	734	73.0	87.2	59.3	74.0	88.8	60.3
2019.........................	1,315	785	530	54.0	65.5	42.9	54.0	65.7	43.3
2018.........................	1,312	793	519	54.3	66.7	42.3	54.5	68.2	42.1
Asian:									
2022.........................	660	539	121	3.3	5.5	1.2	2.9	5.1	1.1
2021.........................	638	504	134	3.2	5.3	1.3	2.9	5.0	1.2
2020.........................	617	507	110	3.2	5.5	1.1	2.9	5.3	1.0
2019.........................	467	368	99	2.5	4.1	1.0	2.3	3.9	0.9
2018.........................	456	356	100	2.4	4.0	1.0	2.2	3.8	0.9
Black:									
2022.........................	4,339	3,025	1,314	10.3	15.0	6.0	9.7	14.5	5.7
2021.........................	5,023	3,477	1,546	12.0	17.3	7.1	11.2	16.6	6.7
2020.........................	4,329	3,047	1,282	10.4	15.4	5.9	9.7	15.0	5.5
2019.........................	3,391	2,409	982	8.2	12.2	4.6	7.6	11.9	4.2
2018.........................	3,143	2,234	909	7.7	11.4	4.3	7.1	11.2	3.9
Native Hawaiian or Other Pacific Islander:									
2022.........................	44	34	10	6.9	10.6	*	7.1	11.2	*
2021.........................	40	33	7	6.4	10.4	*	6.4	10.8	*
2020.........................	25	17	8	4.1	*	*	4.5	*	*
2019.........................	26	20	6	4.4	6.7	*	4.3	7.0	*
2018.........................	34	23	11	5.8	7.8	*	5.9	8.4	*
White:									
2022.........................	36,099	25,139	10,960	18.4	25.8	11.1	14.8	20.5	9.1
2021.........................	38,117	26,671	11,446	19.4	27.3	11.5	15.6	21.8	9.5
2020.........................	35,033	24,568	10,465	17.8	25.3	10.5	14.3	20.2	8.7
2019.........................	27,951	19,588	8,363	14.2	20.1	8.4	11.2	15.8	6.8
2018.........................	26,987	19,001	7,986	13.7	19.5	8.0	10.7	15.3	6.5

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes in this report.

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

[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.

[3]Includes origins and races not shown separately; see Technical Notes.

[4]Includes people of Hispanic origin of any race. The Hispanic-origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.

[5]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.

NOTE: Causes of death attributable to alcohol-induced mortality include *International Classification of Diseases, 10th Revision* codes E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Table 25. Number of deaths, death rate, and age-adjusted death rate for injury by firearms, by Hispanic origin and race and sex: United States, 1999–2022

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All origins and races[3]									
2022.	48,204	41,302	6,902	14.5	25.0	4.1	14.2	24.6	4.1
2021.	48,830	41,866	6,964	14.7	25.5	4.2	14.6	25.3	4.2
2020.	45,222	38,981	6,241	13.7	24.0	3.7	13.6	23.8	3.8
2019.	39,707	34,041	5,666	12.1	21.1	3.4	11.9	20.7	3.4
2018.	39,740	33,955	5,785	12.1	21.1	3.5	11.9	20.7	3.4
2017.	39,773	34,062	5,711	12.2	21.2	3.5	12.0	20.9	3.4
2016.	38,658	32,994	5,664	12.0	20.7	3.5	11.8	20.5	3.4
2015.	36,252	31,032	5,220	11.3	19.6	3.2	11.1	19.4	3.2
2014.	33,594	28,715	4,879	10.5	18.3	3.0	10.3	18.0	3.0
2013.	33,636	28,794	4,842	10.6	18.5	3.0	10.4	18.3	3.0
2012.	33,563	28,838	4,725	10.7	18.7	3.0	10.5	18.5	3.0
2011.	32,351	27,738	4,613	10.4	18.1	2.9	10.2	18.0	2.9
2010.	31,672	27,356	4,316	10.3	18.0	2.7	10.1	17.9	2.7
2009.	31,347	26,921	4,426	10.2	17.9	2.8	10.1	17.8	2.8
2008.	31,593	27,336	4,257	10.4	18.3	2.8	10.3	18.3	2.7
2007.	31,224	27,047	4,177	10.4	18.3	2.7	10.3	18.3	2.7
2006.	30,896	26,712	4,184	10.4	18.2	2.8	10.3	18.2	2.7
2005.	30,694	26,657	4,037	10.4	18.4	2.7	10.3	18.5	2.7
2004.	29,569	25,498	4,071	10.1	17.7	2.7	10.0	17.9	2.7
2003.	30,136	26,124	4,012	10.4	18.3	2.7	10.3	18.5	2.7
2002.	30,242	26,098	4,144	10.5	18.5	2.8	10.5	18.7	2.8
2001.	29,573	25,480	4,093	10.4	18.2	2.8	10.3	18.5	2.8
2000.	28,663	24,582	4,081	10.2	17.8	2.8	10.2	18.1	2.8
1999.	28,874	24,700	4,174	10.3	18.1	2.9	10.3	18.4	2.9
Hispanic[4]									
2022.	5,853	5,081	772	9.2	15.7	2.5	8.9	15.2	2.4
2021.	5,741	5,014	727	9.2	15.8	2.4	8.9	15.3	2.3
2020.	5,003	4,395	608	8.2	14.2	2.0	7.9	13.8	1.9
2019.	4,058	3,503	555	6.7	11.5	1.8	6.6	11.2	1.9
2018.	4,018	3,521	497	6.7	11.6	1.7	6.6	11.6	1.7
2017.	3,884	3,369	515	6.6	11.3	1.8	6.5	11.1	1.8
2016.	3,771	3,316	455	6.6	11.4	1.6	6.4	11.2	1.6
2015.	3,332	2,912	420	5.9	10.2	1.5	5.8	10.1	1.5
2014.	3,010	2,630	380	5.4	9.4	1.4	5.4	9.4	1.4
2013.	2,951	2,595	356	5.5	9.4	1.3	5.4	9.4	1.3
2012.	3,061	2,724	337	5.8	10.1	1.3	5.7	10.1	1.3
2011.	2,947	2,608	339	5.7	9.9	1.3	5.6	9.8	1.3
2010.	3,008	2,694	314	6.0	10.5	1.3	5.9	10.5	1.3
2009.	3,202	2,867	335	6.5	11.4	1.4	6.4	11.4	1.4
2008.	3,256	2,912	344	6.8	12.0	1.5	6.6	11.7	1.5
2007.	3,492	3,155	337	7.6	13.4	1.5	7.2	12.9	1.5
2006.	3,464	3,142	322	7.8	13.8	1.5	7.3	12.8	1.4
2005.	3,469	3,144	325	8.1	14.3	1.5	7.6	13.4	1.5
2004.	3,278	2,973	305	7.9	14.0	1.5	7.5	13.2	1.5
2003.	3,319	2,998	321	8.3	14.6	1.6	7.8	13.7	1.6
2002.	3,143	2,834	309	8.1	14.3	1.6	7.7	13.6	1.6
2001.	3,087	2,774	313	8.3	14.5	1.7	7.8	13.7	1.7
2000.	2,891	2,582	309	8.2	14.2	1.8	7.8	13.6	1.8
1999.	2,878	2,549	329	8.5	14.6	2.0	8.2	14.2	2.0

See footnotes at end of table.

Table 25. Number of deaths, death rate, and age-adjusted death rate for injury by firearms, by Hispanic origin and race and sex: United States, 1999–2022—Con.

[Excludes deaths of nonresidents of the United States]

Hispanic origin and race and year	Number			Crude death rate[1]			Age-adjusted death rate[2]		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Non-Hispanic, single race[5]									
American Indian and Alaska Native:									
2022	530	452	78	21.9	37.7	6.4	22.2	37.7	6.7
2021	466	390	76	19.0	32.2	6.1	19.1	32.1	6.3
2020	449	381	68	18.5	31.9	5.5	18.1	31.2	5.3
2019	336	272	64	13.8	22.7	5.2	13.8	22.5	5.3
2018	361	298	63	14.9	25.0	5.1	15	24.8	5.4
Asian:									
2022	583	474	109	2.9	4.9	1.0	2.7	4.6	1.0
2021	576	469	107	2.9	5.0	1.0	2.9	4.8	1.0
2020	516	435	81	2.7	4.7	0.8	2.6	4.5	0.8
2019	513	424	89	2.7	4.7	0.9	2.5	4.4	0.8
2018	492	396	96	2.6	4.4	1.0	2.5	4.2	1.0
Black:									
2022	14,203	12,410	1,793	33.8	61.4	8.2	33.2	59.0	8.3
2021	15,290	13,349	1,941	36.5	66.3	8.9	36.0	64.0	9.0
2020	13,974	12,416	1,558	33.7	62.7	7.2	33.1	59.9	7.3
2019	10,288	9,198	1,090	25.0	46.8	5.1	24.5	44.8	5.1
2018	9,713	8,567	1,146	23.7	43.8	5.4	23.2	42.0	5.4
Native Hawaiian or Other Pacific Islander:									
2022	65	58	7	10.2	18.0	*	9.8	17.1	*
2021	68	63	5	10.9	19.9	*	10.4	18.9	*
2020	58	52	6	9.5	16.8	*	9.1	15.7	*
2019	54	45	9	9.1	15.0	*	8.6	14.0	*
2018	54	48	6	9.2	16.3	*	8.8	15.6	*
White:									
2022	26,323	22,285	4,038	13.4	22.9	4.1	12.2	20.7	3.9
2021	26,054	22,068	3,986	13.2	22.6	4.0	12.3	21.0	3.9
2020	24,664	20,838	3,826	12.5	21.5	3.8	11.6	19.9	3.7
2019	23,964	20,173	3,791	12.1	20.7	3.8	11.1	19.0	3.6
2018	24,643	20,745	3,898	12.5	21.3	3.9	11.4	19.5	3.7

* Estimate does not meet National Center for Health Statistics standards of reliability; see Technical Notes in this report.
[1]Rates are on an annual basis per 100,000 population in specified group; see Technical Notes.
[2]Age-adjusted rates are per 100,000 U.S. standard population. For method of computation, see Technical Notes.
[3]Includes origins and races not shown separately; see Technical Notes.
[4]Includes people of Hispanic origin of any race. The Hispanic origin category is consistent with 1997 Office of Management and Budget (OMB) standards; see Technical Notes.
[5]Only one race was reported on the death certificate. Hispanic-origin and race categories are consistent with 1997 OMB standards; see Technical Notes.

NOTE: Causes of death attributable to injury by firearms include *International Classification of Diseases, 10th Revision* codes U01.4, W32–W34, X72–X74, X93–X95, Y22–Y24, and Y35.0.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

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 (D.C.) and are processed by the National Center for Health Statistics (NCHS). Death certificates are completed by funeral directors, attending physicians, medical examiners, coroners, or other people legally authorized to certify deaths. Data for 2022 are based on records of deaths that occurred during 2022 and were received as of September 7, 2023. Data for earlier years can be obtained from the Centers for Disease Control and Prevention's (CDC) WONDER database (14).

The U.S. Standard Certificate of Death, which the states use as a model, was revised in 2003 (7). Before 2003, the standard certificate of death had not been revised since 1989 (15). Beginning in 2018, all 50 states and D.C. used the 2003 revision of the U.S. Standard Certificate of Death for the entire year. During 2003–2017, both the 1989 and the 2003 standard certificates were used. For this transitional period, race and Hispanic ethnicity of decedents was reported using the 1977 Office of Management and Budget (OMB) guidelines (1989 certificate), which allowed the reporting of only one race and provided four choices, and the 1997 OMB guidelines (2003 certificate), which allowed the reporting of more than one race and provided five categories (7,8).

Data for Commonwealth of the Northern Mariana Islands (Northern Marianas), Guam, Puerto Rico, and U.S. Virgin Islands are included in tables showing data by state but are not included in U.S. totals. Data for American Samoa for the 2022 data year were not available at the time of file closing and, consequently, are not included in this report. In 2022, Guam, Northern Marianas, Puerto Rico, and U.S. Virgin Islands collected and reported death data using the 2003 revision of the U.S. Standard Certificate of Death. Mortality statistics are based on information submitted by the jurisdictions and coded by NCHS through the Vital Statistics Cooperative Program. For the 2022 data year, all states, D.C., New York City, Northern Marianas, and Puerto Rico submitted mortality medical data and demographic data in electronic data files to NCHS. Guam and U.S. Virgin Islands submitted copies of death certificates, from which NCHS entered and coded all medical data and demographic data.

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 Northern Marianas, Puerto Rico, and U.S. Virgin Islands exclude deaths of nonresidents for each area. For Guam, however, mortality statistics exclude deaths that occurred to nonresidents of Guam or the United States (50 states and D.C.).

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 10th revision of this classification (ICD–10) (33). 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 (SEs). 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 (34–39).

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 (40,41). ICD includes rules for selecting the underlying cause of death and regulations on the use of ICD.

Before 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) (42), multiple-cause codes are inputted into 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) (43) 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 (44), 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 2022, SuperMICAR was used to process all of the country's death records.

In 2022, NCHS began using MedCoder, a new system that integrates natural language processing and machine learning for coding multiple causes of death. This system replaced the Mortality Medical Data System (MMDS). MedCoder can code nearly 90% of records automatically, compared with less than 75% for the previous system. For more information, please visit: https://www.cdc.gov/nchs/nvss/medcoder.htm.

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" (4). 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 (45,46–47).

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 October 2020 to include WHO updates to ICD–10 for data year 2020) (48). Two tabulation lists are used to rank leading causes of death (48): a) "List of 113 Selected Causes of Death, Enterocolitis due to *Clostridium difficile*, and COVID-19" (the title of which was modified in 2009 to include Enterocolitis due to *Clostridium difficile* and modified again in 2020 to include COVID-19), which is used for deaths of all ages; and b) "List of 130 Selected Causes of Infant Death," which is used for infants. Not all causes in the 113 list of causes are rankable. 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 with two exceptions: 1) COVID-19 is included in the category Other and unspecified viral diseases but is not a separate rankable cause, and 2) the category of Major cardiovascular diseases is not on the list. More detail regarding ranking procedures can be found in "Deaths: Leading Causes for 2022" (2).

Leading cause-of-death trends discussed in this report are based on cause-of-death data according to ICD–10 for 1999–2022 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" (36) and "Deaths: Final Data for 1999" (49).

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 NCHS 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 (36–39). Consequently, 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 2022

No codes were added or deleted from the list of valid underlying cause-of-death codes in 2022. Information on codes added or deleted in previous years is available from: https://www.cdc.gov/nchs/data/dvs/Part9InstructionManual2020-508.pdf (48).

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://archive.cdc.gov/#/details?url=https://www.cdc.gov/nchs/icd/terrorism_code.htm. No deaths were assigned to terrorism codes in 2022. Only deaths to residents of the United States are included in this report.

In any given year, 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.

COVID-19

COVID-19 (ICD–10 code U07.1) became an official new cause of death in 2020 after the first death from COVID-19 was reported in the United States. For people age 1 and older, COVID-19 was added as a rankable cause of death. For infants (younger than 1), COVID-19 was added to the cause-of-death category Other and unspecified viral diseases but is not considered as a separate

rankable cause. In report tables showing 113 selected causes, COVID-19 was added to the bottom of the table.

Deaths assigned to COVID-19 may not reflect all deaths directly or indirectly due to COVID-19 because some deaths due to COVID-19 may not have been diagnosed, especially early in the pandemic, and some deaths may have been assigned to another, co-existing condition. Estimates of excess deaths—the difference between the observed number of deaths and the expected number of deaths—can provide information about the effect of the COVID-19 pandemic on mortality. Excess deaths include deaths directly or indirectly attributable to COVID-19. Estimates of excess deaths based on provisional data are available from: https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm (50). Provisional data are incomplete and may underestimate counts relative to final data, but they provide an early indication of shifts in mortality trends and can guide public health policies and interventions aimed at reducing mortality (51).

COVID-19 data in this report do not include deaths where COVID-19 may have been reported as a contributing cause but was not considered to be the underlying cause of death. For additional coding detail and guidelines, see: https://www.cdc.gov/nchs/covid19/coding-and-reporting.htm. Data are not adjusted for potential issues with diagnosis, testing, or reporting. Data in this report are final data and may differ from provisional data published previously (available from: https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm).

Enterocolitis due to Clostridium difficile

The number of deaths from Enterocolitis due to *Clostridium difficile* (*C. difficile*) (ICD–10 code A04.7) was 4,231 in 2022. Deaths from this cause increased dramatically from 793 deaths in 1999 to a high of 8,085 deaths in 2011 (14). Because of the increasing importance of this cause of death (21,22), beginning with data year 2006, *C. difficile* was added to the list of rankable causes.

Quality of reporting and processing cause of death

The 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 the 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, increased from 1.00% in 2021 to 1.04% in 2022.

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. Before 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 2, available from: https://www.cdc.gov/nchs/nvss/instruction_manuals.htm (40–42). Although coding rule changes can impact the number of deaths assigned to a given code, other factors, such as increased use of a term by certifiers, can also influence changes from year to year. Trend data for causes of death affected by coding rule changes 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 (40,52,53). In 2022, some states did not confirm some or all deaths from rare causes.

Codes for dementia-related causes

Causes of death attributable to dementia-related mortality include ICD–10 codes F01, Vascular dementia; F03, Unspecified dementia; G30, Alzheimer disease; and G31, Other degenerative diseases of nervous system, not elsewhere classified.

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 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 drug-overdose causes—Causes of death attributable to drug overdose are a subcategory of drug-induced causes. Drug-overdose mortality includes ICD–10 codes X40–X44, X60–X64, X85, and Y10–Y14.

Codes for alcohol-induced deaths

Causes of death attributable to alcohol-induced mortality include ICD–10 codes E24.4, Alcohol-induced pseudo-Cushing 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-related deaths

Causes of death attributable to firearm-related injuries 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 firearm-related injuries exclude deaths due to explosives and other causes indirectly related to firearms.

Hispanic origin and race

The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races) (7). This change was implemented to reflect the increasing diversity of the U.S. population and to be consistent with the decennial census and the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," issued by OMB (8). This revision replaced standards that were issued in 1977 (10). The new standards mandate the collection of more than one race where applicable, for federal data (8) and require the collection of information on a minimum set of five races (more than the minimum number of race categories are reported on death certificates) (7). Multiple race includes any combination of White, Black or African American, American Indian and Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. If two or more specific subgroups are reported on a death certificate and both subgroups fall under the same larger category, such as Korean and Chinese, those subgroups count as a single race (in this case, Asian) rather than as multiple races.

The number of states reporting multiple race increased, from 7 states in 2003 to all 50 states and the District of Columbia by 2018 (Table I). In 2022, more than one race was reported for 0.6% of decedents of non-Hispanic origin and for 0.9% of decedents of Hispanic origin (Table II). Although still uncommon, multiple races were reported more often for younger decedents than for older decedents (3.6% of decedents younger than age 25 compared with 1.0% of decedents ages 25–64 and 0.4% of decedents age 65 and older) (14).

During 2003–2017, both the 1989 and the 2003 standard death certificates were used. For this transitional period, states using the1989 death certificate reported the race and Hispanic ethnicity of decedents based on the OMB 1977 guidelines, which allowed the reporting of only one race and provided four choices: White, Black, American Indian and Alaskan Native, and Asian or Pacific Islander. Under these standards, data for Asian or Pacific Islander people were collected as a single group; that is, data for Asian people were not reported separately from Pacific Islander people (10,15). States using the 2003 death certificate reported the race and Hispanic ethnicity of decedents based on the OMB 1997 guidelines, which allowed the reporting of more than one race and provided five categories (7,8). These guidelines provide for the reporting of Asian people separately from Native Hawaiian or Other Pacific Islander people (8). Jurisdictions adopted the 2003 standard certificate at different times throughout the period 2003–2017. To provide consistent mortality statistics by Hispanic origin and race during this period, multiple-race data for states that had adopted the 2003 standard certificate were bridged back to the 1977 OMB standard single-race categories.

Beginning in 2018, all states collected data on race according to the 1997 OMB guidelines, so the use of the bridged-race process was no longer necessary. In 2018, the new race categories became the official categories for reporting race. For comparative purposes, data by both single- and bridged-race were tabulated through data year 2020 (30). Beginning with the 2021 data year, bridged-race estimates are no longer produced, and bridged race data for earlier years are no longer presented in this report.

Hispanic origin and race are two distinct attributes and are reported separately on the death certificate. As a result, 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 people of any race.

Quality of race and Hispanic-origin data—Death rates for Hispanic, American Indian and Alaska Native non-Hispanic, Asian non-Hispanic, and Native Hawaiian or Other Pacific Islander non-Hispanic populations are affected by 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 and Hispanic decedents, as well as undercounts of these groups in censuses (16,54–56).

A number of studies have been conducted on the reliability of Hispanic origin and race reported on the death certificate by comparing it with Hispanic origin and race reported on another data collection instrument, such as a census or survey (16,54–56). 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, Hispanic origin and race 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, consequently, 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.

Using the National Longitudinal Mortality Study, Arias et al. examined the reliability of Hispanic origin and race reported on more than 559,000 death certificates compared with that

Table I. Year state started reporting multiple race and year state began using the revised standard certificate of death: Each state

Area	Year[1] state began reporting multiple race	Year state began using 2003 standard certificate	Area	Year[1] state began reporting multiple race	Year state began using 2003 standard certificate
Alabama	2016	2016	Montana	2003	2003
Alaska	2014	2014	Nebraska	2005	2005
Arizona	2010	2010	Nevada	2008	2008
Arkansas	2008	2008	New Hampshire	[9]2004	[10]2004
California	2003	2003	New Jersey	2004	2004
Colorado	2015	2015	New Mexico	2006	2006
Connecticut	2005	2005	New York	2003	2003
Delaware	2007	2007	North Carolina	2014	2014
District of Columbia	[2]2005	[3]2005	North Dakota	2008	2008
Florida	2005	2005	Ohio	2007	2007
Georgia	2008	2008	Oklahoma	2004	2004
Hawaii	2003	2014	Oregon	2006	2006
Idaho	2003	2003	Pennsylvania	2012	2012
Illinois	2008	2008	Rhode Island	2006	2006
Indiana	2008	2008	South Carolina	2005	2005
Iowa	2011	2011	South Dakota	2004	2004
Kansas	2005	2005	Tennessee	2012	2012
Kentucky	[4]2010	[5]2010	Texas	2006	2006
Louisiana	[4]2012	[5]2012	Utah	2005	2005
Maine	2003	[6]2010	Vermont	[4]2008	[5]2008
Maryland	2015	2015	Virginia	[11]2014	[12]2014
Massachusetts	[7]2014	[8]2014	Washington	2004	2004
Michigan	2004	2004	West Virginia	[7]2017	[8]2017
Minnesota	2004	[3]2011	Wisconsin	2003	[5]2013
Mississippi	2012	2012	Wyoming	2004	2004
Missouri	2010	2010			

[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: National Center for Health Statistics, National Vital Statistics System, mortality data file.

reported on a total of 38 Current Population Surveys (CPSs) conducted by the U.S. Census Bureau for 1979–2011 (16,54). Agreement between the two sources was found to be excellent for the White non-Hispanic and Black non-Hispanic 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 American Indian and Alaska Native non-Hispanic population and 1.03 for the Asian or Other Pacific Islander non-Hispanic population, indicating net underreporting on death certificates of 33% for American Indian and Alaska Native non-Hispanic and 3% for Asian or Other Pacific Islander non-Hispanic. Using the new race standard, Asian and Pacific Islander are separate categories. The ratio of deaths for CPS-to-death certificates for Hispanic people 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 some race–ethnicity populations.

A new study on race and Hispanic-origin misclassification for the American Indian and Alaska Native non-Hispanic population found similar results as the earlier study, with a misclassification rate of 1.34. The study was based on an extract of the 2010 Census Edited File–Census Unedited File Match File containing records for people classified as American Indian and Alaska Native alone or in combination with another race in the 2010 decennial census linked to the National Death Index to identify decedents for April 1, 2010, to December 31, 2011 (57).

In addition, undercoverage of minority groups in the census and resultant population estimates introduces biases into death

Table II. Deaths, by Hispanic origin and race: United States, 2022

[Data exclude deaths with origin not stated or not classifiable. Records with race not stated or not classifiable are imputed; see Technical Notes in this report]

Hispanic origin and race	Deaths	Percent of non-Hispanic deaths[1]	Hispanic origin and race	Deaths	Percent of Hispanic deaths[1]
Non-Hispanic	2,994,727	100.0	Hispanic	275,684	100.0
One race	2,977,823	99.4	One race	273,099	99.1
American Indian and Alaska Native (AIAN)	23,613	0.8	AIAN	1,705	0.6
Asian	89,591	3.0	Asian	886	0.3
Black	411,934	13.8	Black	5,353	1.9
Native Hawaiian or Other Pacific Islander (NHOPI)	4,592	0.2	Native Hawaiian or Other Pacific Islander (NHOPI)	315	0.1
White	2,448,093	81.7	White	264,840	96.1
Two or more races	16,904	0.6	Two or more races	2,585	0.9
Two races	15,842	0.5	Two races	2,365	0.9
AIAN and Asian	203	0.0	AIAN and Asian	31	0.0
AIAN and NHOPI	44	0.0	AIAN and NHOPI	4	0.0
AIAN and White	5,997	0.2	AIAN and White	936	0.3
Asian and NHOPI	1,145	0.0	Asian and NHOPI	27	0.0
Asian and White	2,975	0.1	Asian and White	574	0.2
Black and AIAN	967	0.0	Black and AIAN	58	0.0
Black and Asian	426	0.0	Black and Asian	22	0.0
Black and NHOPI	134	0.0	Black and NHOPI	7	0.0
Black and White	2,969	0.1	Black and White	580	0.2
NHOPI and White	982	0.0	NHOPI and White	126	0.0
Three races	1,047	0.0	Three races	213	0.1
AIAN, Asian, and NHOPI	5	0.0	AIAN, Asian, and NHOPI	1	0.0
AIAN, Asian, and White	36	0.0	AIAN, Asian, and White	16	0.0
AIAN, NHOPI, and White	24	0.0	AIAN, NHOPI, and White	5	0.0
Asian, NHOPI, and White	643	0.0	Asian, NHOPI, and White	115	0.0
Black, AIAN, and Asian	16	0.0	Black, AIAN, and Asian	3	0.0
Black, AIAN, and NHOPI	3	0.0	Black, AIAN, and NHOPI	–	–
Black, AIAN, and White	232	0.0	Black, AIAN, and White	54	0.0
Black, Asian, and NHOPI	15	0.0	Black, Asian, and NHOPI	2	0.0
Black, Asian, and White	63	0.0	Black, Asian, and White	16	0.0
Black, NHOPI, and White	10	0.0	Black, NHOPI, and White	1	0.0
Four races	15	0.0	Four races	7	0.0
AIAN, Asian, NHOPI, and White	4	0.0	AIAN, Asian, NHOPI, and White	4	0.0
Black, AIAN, Asian, and NHOPI	–	–	Black, AIAN, Asian, and NHOPI	–	–
Black, AIAN, Asian, and White	7	0.0	Black, AIAN, Asian, and White	2	0.0
Black, AIAN, NHOPI, and White	1	0.0	Black, AIAN, NHOPI, and White	–	–
Black, Asian, NHOPI, and White	3	0.0	Black, Asian, NHOPI, and White	1	0.0
Five races	–	–	Five races	–	–
Black, AIAN, Asian, NHOPI, and White	–	–	Black, AIAN, Asian, NHOPI, and White	–	–

0.0 Quantity more than zero but less than 0.05.
– Quantity zero.
[1]Percentages may not add to 100 due to rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

rates by Hispanic origin and race (16,54–56,58,59). Unlike the 1990 census, coverage error in the 2000 census was found to be statistically significant only for the White non-Hispanic population (overcounted by about 1.13%) and Black non-Hispanic population (undercounted by about 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 populations: Black non-Hispanic (2.07%), White non-Hispanic (–0.84%), Hispanic (1.54%), and on-reservation American (4.88%) populations. The net undercounts were not statistically different from zero for the Asian non-Hispanic (0.08%), Native Hawaiian or Pacific Islander (1.34%), and off-reservation American Indian (–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.

Mortality data presented by specified Hispanic subgroup for the United States include Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and Other Hispanic populations. Data by specified Hispanic populations are affected by whether a state submits literal text to the National Center for Health Statistics (NCHS), making it possible to identify decedents as being of Central American, Cuban, Dominican, Mexican, Puerto Rican, or South American.

Numbers of deaths and death rates discussed in this report are not adjusted for misclassification of ethnicity and race. These data are consistent with data in the general mortality file as reported by the jurisdictions. However, to illustrate the effect of ethnicity and race misclassification, Table III presents classification ratios by Hispanic origin and race, age, and sex and Table IV presents age-adjusted rates by Hispanic origin and race and sex, both unadjusted and adjusted for ethnicity–race misclassification. Classification ratios and age-adjusted death rates adjusted for misclassification of Hispanic origin and race for the Native Hawaiian or Other Pacific Islander population were not produced because the data needed to evaluate ethnicity and race misclassification on death certificates for this population are not currently available.

Hispanic origin not stated or not classifiable and race not stated or not classifiable—In 2022, death records with Hispanic origin not stated or not classifiable were not imputed and accounted for 0.3% of all records. Records with race not stated or not classifiable (1.4% of all records) were imputed to one of the five single-race categories by assigning the record a single-race value based on the last single-race record processed.

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

In 2022, multiple race was reported on the revised birth certificates of all 50 states, the District of Columbia, Guam, Northern Marianas, Puerto Rico, and U.S. Virgin Islands using the 2003 revision of the U.S. Standard Certificate of Birth (61).

IMRs by Hispanic origin and race are based on numbers of resident infant deaths by Hispanic origin and race and numbers of resident live births by Hispanic origin and race of mother for the United States. In computing IMRs, deaths and live births of unknown or not classifiable origin are not distributed among the specified Hispanic and non-Hispanic groups. In the United States in 2022, the percentage of infant deaths of unknown origin was 1.1% (Table 2), and the percentage of live births to mothers of unknown origin was 1.0% (61).

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

IMRs calculated from the general mortality file for specified Hispanic origin and race contain errors because of reporting problems that affect the classification of Hispanic origin and race on the birth and death certificates for the same infant. IMRs by specified Hispanic origin and race are more accurate when based on the linked file of infant deaths and live births (31). The linked file computes IMRs using the Hispanic origin and race of the mother from the birth certificate in both the numerator and denominator of the rate. In addition, the mother's Hispanic origin and race from the birth certificate are considered to be more accurately reported than the infant's Hispanic origin and race from the death certificate. On the birth certificate, Hispanic origin and race are generally reported by the mother at the time of delivery, whereas on the death certificate, the infant's Hispanic origin and race 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 Hispanic origin and race are based on information from the death certificate (31,55).

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. Before 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 older. 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

Table III. Classification ratio and standard error, by Hispanic origin and race, age, and sex

[Standard errors are shown in parentheses below each classification ratio]

| | Hispanic[1] | | | Non-Hispanic[1] | | | | | | | | | | | |
| | | | | American Indian and Alaska Native | | | Asian[2] | | | Black | | | White | | |
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All ages	1.0329	1.0362	1.0294	1.3354	1.3488	1.3197	1.0331	1.0480	1.0171	1.0047	1.0041	1.0053	0.9995	0.9993	0.9997
	(0.005)	(0.007)	(0.007)	(0.007)	(0.010)	(0.011)	(0.009)	(0.013)	(0.012)	(0.002)	(0.002)	(0.002)	(0.000)	(0.001)	(0.000)
0...............	*1.7054	*1.0000	*2.1519	0.9630	*0.9444	*1.0000	---	---	---	*1.0000	*1.0000	*1.0000	*1.0000	*1.0000	*1.0000
	(0.896)	(0.000)	(1.821)	(0.132)	(0.181)	(0.161)	…	…	…	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
1–14............	0.9905	0.9659	*1.0299	1.1243	1.1546	1.0833	*0.8655	*0.8426	*1.0000	1.0266	0.9379	*1.1751	0.9918	1.0755	0.8770
	(0.125)	(0.181)	(0.143)	(0.051)	(0.069)	(0.074)	(0.131)	(0.154)	(0.000)	(0.058)	(0.065)	(0.123)	(0.037)	(0.049)	(0.056)
15–24..........	0.9668	0.9325	1.0604	1.1462	1.1201	1.2190	1.2285	*1.4276	*0.9721	1.0248	1.0215	1.0343	0.9976	1.0019	0.9869
	(0.046)	(0.055)	(0.079)	(0.029)	(0.033)	(0.056)	(0.294)	(0.508)	(0.254)	(0.020)	(0.019)	(0.055)	(0.010)	(0.011)	(0.020)
25–34..........	1.0354	1.0401	1.0232	1.1375	1.1557	1.1033	1.1527	1.0967	*1.2648	0.9855	0.9770	1.0008	1.0021	1.0034	0.9994
	(0.041)	(0.043)	(0.094)	(0.025)	(0.032)	(0.040)	(0.106)	(0.102)	(0.248)	(0.009)	(0.011)	(0.015)	(0.006)	(0.007)	(0.013)
35–44..........	1.0434	1.0645	1.0066	1.1799	1.1815	1.1772	1.0338	1.0459	1.0125	1.0062	1.0073	1.0048	0.9980	0.9997	0.9951
	(0.025)	(0.035)	(0.028)	(0.022)	(0.027)	(0.036)	(0.066)	(0.090)	(0.092)	(0.007)	(0.010)	(0.012)	(0.003)	(0.004)	(0.005)
45–54..........	1.0584	1.0372	1.0953	1.3915	1.3913	1.3916	1.0699	1.1123	1.0113	1.0002	1.0019	0.9982	0.9969	0.9965	0.9976
	(0.018)	(0.021)	(0.033)	(0.021)	(0.027)	(0.033)	(0.040)	(0.054)	(0.059)	(0.004)	(0.007)	(0.005)	(0.002)	(0.002)	(0.003)
55–64..........	1.0571	1.0517	1.0659	1.4281	1.4547	1.3917	1.0274	1.0694	0.9784	1.0003	0.9965	1.0046	0.9994	0.9992	0.9997
	(0.013)	(0.017)	(0.022)	(0.019)	(0.026)	(0.029)	(0.028)	(0.044)	(0.035)	(0.004)	(0.006)	(0.005)	(0.001)	(0.002)	(0.002)
65–74..........	1.0295	1.0485	1.0072	1.3654	1.4244	1.2980	1.0845	1.0841	1.0850	1.0062	1.0055	1.0070	0.9967	0.9967	0.9966
	(0.010)	(0.014)	(0.015)	(0.017)	(0.025)	(0.023)	(0.022)	(0.030)	(0.033)	(0.003)	(0.005)	(0.005)	(0.001)	(0.001)	(0.001)
75–84..........	1.0192	1.0188	1.0196	1.3099	1.3367	1.2852	1.0305	1.0328	1.0281	1.0057	1.0057	1.0058	1.0004	1.0003	1.0004
	(0.009)	(0.013)	(0.013)	(0.017)	(0.025)	(0.022)	(0.014)	(0.022)	(0.017)	(0.003)	(0.005)	(0.004)	(0.001)	(0.001)	(0.001)
85–94..........	1.0208	1.0313	1.0137	1.3845	1.3807	1.3870	0.9962	0.9983	0.9944	1.0110	1.0155	1.0086	1.0008	1.0007	1.0009
	(0.011)	(0.018)	(0.014)	(0.024)	(0.038)	(0.032)	(0.015)	(0.020)	(0.021)	(0.004)	(0.007)	(0.005)	(0.001)	(0.001)	(0.001)
95 and older......	1.0732	1.0509	1.0842	1.3951	1.3043	1.4240	0.9755	1.0238	0.9405	0.9980	1.0070	0.9954	1.0005	0.9995	1.0008
	(0.025)	(0.034)	(0.033)	(0.052)	(0.098)	(0.062)	(0.039)	(0.045)	(0.057)	(0.010)	(0.029)	(0.010)	(0.001)	(0.003)	(0.001)

* Ratio does not meet National Center for Health Statistics standards of reliability; either the unweighted number of Current Population Survey deaths, the unweighted number of death certificate deaths, or both are based on fewer than 20 deaths.

--- Data not available.

… Category not applicable.

[1]Classification ratios for the Hispanic and non-Hispanic race groups (Asian, Black, and White) are based on the National Longitudinal Mortality Study data (see: https://www.cdc.gov/nchs/data/series/sr_02/sr02_172.pdf). Classification ratios for the American Indian and Alaska Native non-Hispanic population are based on the Census AIAN Extract–Mortality Linked Data (see: https://www.cdc.gov/nchs/data/nvsr/nvsr70/NVSR70-12.pdf).

[2]Classification ratios for the Asian non-Hispanic race group were estimated based on combined data for the Asian and Pacific Islander non-Hispanic groups due to data availability. However, the ratios reflect misclassification predominantly among the Asian component, which makes up more than 95% of the combined group.

SOURCES: The validity of race and Hispanic-origin reporting on death certificates in the United States: An update. National Center for Health Statistics. Vital Health Stat 2(172). 2016, and Mortality profile of the non-Hispanic American Indian or Alaska Native population, 2019. National Vital Statistics Reports, vol 70 no12. National Center for Health Statistics. 2021. DOI: https://dx.doi.org/10.15620/cdc:110370.

Table IV. Age-adjusted death rate, unadjusted and adjusted for race–ethnicity misclassification, by Hispanic origin and race, and sex: United States, 2022

[Hispanic origin and race categories are consistent with 1997 Office of Management and Budget standards]

Hispanic origin and race and sex	Age-adjusted rate[1]	
	Unadjusted[2]	Adjusted[3]
Hispanic, total[4]	614.7	633.9
Male	748.8	774.2
Female	498.4	512.9
Non-Hispanic, single race[5]:		
American Indian and Alaska Native.	947.9	1,249.8
Male	1,084.3	1,444.1
Female	816.1	1,063.6
Asian	417.5	430.5
Male	501.7	522.2
Female	350.7	354.9
Black.	1,002.8	1,007.8
Male	1,257.5	1,263.3
Female	809.0	813.2
White	822.2	821.7
Male	972.1	971.9
Female	692.7	691.9

[1]Rates per 100,000 U.S. standard population. For method of computation, see Technical Notes in this report.
[2]Data are not adjusted for race and Hispanic misclassification on death certificates; see Technical Notes. Rates are consistent with rates in other tables shown in this report.
[3]Data are adjusted for race and Hispanic-origin misclassification on death certificates; see Technical Notes. Rates may differ from rates in other tables shown in this report.
[4]Includes people of Hispanic origin of any race; see Technical Notes.
[5]Only one race was reported on the death certificate; see Technical Notes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

new methodology (67). Life table data shown in this report for data years 2001–2022 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, the values may differ from those previously published in annual final mortality and life table reports. Historically, NCHS has produced annual life tables by race, including the White and Black populations, regardless of Hispanic origin, but did not produce life tables for other racial or ethnic groups. Beginning with data year 2006 (originally published elsewhere) (18), NCHS began producing life tables for the Hispanic, Black non-Hispanic, and White non-Hispanic populations, after conducting research into the quality of ethnicity and race reporting on death certificates and developing methodologies to correct for misclassification of these populations on death certificates (16,54). Beginning with data year 2019, life tables for the American Indian and Alaska Native non-Hispanic and Asian non-Hispanic populations were added to the annual life tables series. A new data source was used to evaluate the quality of ethnicity and race reporting and generate adjustment factors for the American Indian and Alaska Native population (57). Life tables for the Asian non-Hispanic population were produced using the same methodology as that used for the American Indian and Alaska Native non-Hispanic population following the transition to the 1997 OMB standard for the collection of race and ethnicity data which disaggregated the

Asian and Native Hawaiian or Other Pacific Islander populations (8). 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.

Race-specific life tables for 2018 through 2022 presented in this report are based on the new OMB standard and show estimates for single-race groups. These estimates may not be comparable to those of previous years that are based on bridged-race groups. Estimates for bridged-race categories were discontinued in data year 2021. The category, "Hispanic" is consistent with previous reports, and trend data for the Hispanic population are not affected by the race category changes.

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 14). In this framework, cause-of-injury deaths are organized principally by mechanism (such as firearm or poisoning), and secondarily by manner or intent of death (such as 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 9) present external causes of death (ICD–10 codes *U01–*U03 and V01–Y89); in contrast, the matrix (Table 14) 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 "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 WONDER (https://wonder.cdc. gov/) or through CDC WISQARS (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 2022. 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.

Marital status

Mortality data by marital status are generally of high quality. A study of death certificate data using the 1986 National Mortality Followback Survey showed a high level of consistency in reporting marital status (59).

Although Table 13 shows age-specific death rates by marital status for age group 15–24, these rates are not included in the computation of the age-adjusted rate because of their high variability, particularly for the widowed population. Furthermore, age groups 75–84 and 85 and older are combined because of high variability in death rates among those age 85 and older, particularly for the never-married population.

Educational attainment

Table 14 presents mortality data by educational attainment for ages 25–64. Data are not shown for ages younger than 25 years because people younger than age 25 may not have completed their education. Data for those age 65 and older are not shown because reporting quality is poorer at older ages (72). Age-adjusted death rates by educational attainment were computed based on the age-specific rates and the standard population for those ages 25–64. Data were about 97% complete on a state-of-occurrence basis.

Injury at work

Deaths, crude death rates, and age-adjusted death rates for injury at work (Tables 15 and 16) include those age 15 and older. Information on deaths attributed to injuries at work is derived from a separate item on the death certificate that asks the medical certifier whether the death resulted from an injury sustained at work.

Infant mortality

IMRs 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 IMRs, see the report "Births: Final Data for 2022" (61). In contrast to IMRs based on live births, infant death rates are based on the estimated population younger than age 1. 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, 2022, population estimate of people younger than age 1. These rates are presented per 100,000 population in this age group. Because of differences in the denominators, infant death rates may differ from IMRs.

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, IMRs 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.

Maternal mortality

Maternal mortality rates are computed based on the number of live births. The maternal mortality rate indicates the likelihood of a pregnant woman dying of maternal causes. The rates are calculated by dividing the number of maternal deaths in a calendar year by the number of live births registered for the same period and are presented as rates per 100,000 live births. Because the population of pregnant women who are at risk of a maternal death is unknown, the number of live births is used as the denominator.

Maternal deaths are defined by WHO as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes" (4). Included in these deaths are ICD–10 codes A34, O00–O95, and O98–O99.

The 2003 revision of the U.S. Standard Certificate of Death introduced a pregnancy-related checkbox question to help identify pregnancy-related deaths. Adopting a pregnancy status question consistent with the standard death certificate increased the identification of maternal deaths. Because maternal mortality was not comparable between states using a pregnancy checkbox and those not using a checkbox, NCHS suspended publishing maternal mortality data after the 2007 data year until all states adopted use of the revised certificate (32).

Beginning in 2018, all 50 states and D.C. used the revised certificate for the entire year including its pregnancy checkbox (in the first part of the 2021 data year, California used a different checkbox from that on the U.S. Standard Certificate of Death that indicates if pregnant within the last year but does not indicate detail on whether pregnant at the time of death, pregnant 42 days before death, or pregnant 2 days to 1 year before death, but California transitioned to use of the standard checkbox later in the 2021 data year.) (32). Because maternal mortality data among states became comparable, NCHS resumed publication of maternal mortality statistics in 2018.

NCHS adopted a method (called the 2018 method) for coding maternal deaths, which was developed to improve the quality of maternal mortality data after studies concluded that implementation of the checkbox had resulted in overreporting of maternal deaths, particularly among older women (32). The 2018 method restricts use of a pregnancy checkbox for identifying maternal deaths to a more limited age group than before. In addition, if the checkbox is the only indication of pregnancy

on the death certificate and no other pregnancy information is provided in the cause-of-death section, the 2018 method restricts assignment of maternal codes solely to the underlying cause of death.

Between 2018 and 2020, the 2018 method was implemented manually, but was incorporated into the automated system beginning with the 2021 data year. The transition to automated processing changed the order in which information from the pregnancy checkbox and cause-of-death fields on the death certificate are used to assign ICD–10 underlying cause-of-death codes. As a result, some deaths that would have previously been assigned mostly to O26.8, Other specified pregnancy-related conditions as the underlying cause-of-death code were instead assigned to O98, Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium; or O99, Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium.

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 before 2020 and estimated as of July 1 for all other years. The populations used for computing death rates for 2022 in Tables B, 1, 2, 6, 8, and 10–12, 15–17, and 22–25 are estimated as of July 1, 2022 based on the Blended Base produced by the U.S. Census Bureau in lieu of the April 1, 2020 decennial population count. The Blended Base consists of the blend of Vintage 2020 population estimates for April 1, 2020 (based on April 1, 2010, decennial census), blended with the 2020 Demographic Analysis Estimates and the 2020 Census Edited File (see https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/methods-statement-v2022.pdf). Detailed populations from the 2020 census were not available when this report was prepared. The U.S. Census Bureau provided all population estimates used in this report. When the 2010–2020 intercensal population estimates based on the 2010 and 2020 decennial censuses become available, population-based rates for years 2011–2020 will be recalculated and presented in an upcoming report. Meanwhile, considerable caution should be used in interpreting the rates and trends for the nation and states (73).

Population estimates used to compute death rates for the United States for 2022 are shown for 5-year age groups by Hispanic origin and race in Table V (17).

Population estimates used to compute death rates by Hispanic subgroup, marital status, and educational attainment are shown in tables VI, VII, and VIII, respectively. These population estimates were prepared by the U.S. Census Bureau using the 2022, 1-year ACS (74).

Populations used for computing death rates by state shown in Table IX are estimated as of July 1, 2022, using the Blended Base (17).

Populations used to compute rates for Puerto Rico, Guam, and Northern Marianas are based on population estimates provided by the U.S. Census Bureau's International Database

(75). Population estimates for each state and territory are not subject to sampling variation because the sources used in demographic analysis are complete counts.

Computing rates

Except for infant and maternal mortality rates, rates are on an annual basis per 100,000 estimated population residing in the specified area. Infant and maternal 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 X), 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 is 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 over 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: "Age Standardization of Death Rates: Implementation of the Year 2000 Standard" (76). 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 X). 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, U.S. Virgin Islands, 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 X.

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 are not subject to sampling error. 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 (77,78). 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 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 (77). Using the properties of the Poisson distribution, the standard error (SE) associated with the number of deaths (D) is

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

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

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

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

The coefficient of variation or relative standard error (RSE) is a useful measure of relative variation. RSE is calculated by dividing the statistic (such as 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,

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

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

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

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 X and *Age-adjusted death rate* in the "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

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

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

$$SE(IMR) = IMR \cdot \sqrt{\frac{var(D)}{E(D)^2} + \frac{var(B)}{E(B)^2}} = IMR \cdot \sqrt{\frac{1}{D} + \frac{1}{B}} \qquad [5]$$

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

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

For maternal mortality rates, Formulas 5 and 6 may be used, substituting the maternal mortality rate for *IMR*.

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 3, 13, and 14, which are calculated using population figures that are subject to sampling error, and for rates adjusted for misclassification in Table VI.

SE associated with the age-specific death rates adjusted for Hispanic origin and race misclassification ($\acute{R}_i$) on death certificates assumes the population denominator (P_i) is a constant and is

$$SE(\acute{R}_i) = \sqrt{[(CR_i^2 SE(D_i)^2) + (D_i^2 SE(CR_i)^2)]/P_i^2} \qquad [7]$$

SE of the age-adjusted death rate adjusted for Hispanic origin and race misclassification ($\acute{R}'$) is

$$SE(\acute{R}') = \sqrt{\sum_i \left(\frac{P_{si}}{P_s}\right)^2 SE(\acute{R}_i)^2} \qquad [8]$$

Again, this is a major issue. Classification quality has been evaluated for both race and a combination of Hispanic origin and race. So, there are ratios for "White" regardless of Hispanic origin and for "White non-Hispanic" where:

- $\acute{R}_i$ is the age-specific rate adjusted for Hispanic origin and race misclassification on death certificates for the ith age group.
- P_i is the age-specific population for the ith age group.
- D_i is the age-specific number of deaths for the ith age group.
- CR_i is the age-specific classification ratio for the ith age group (see Table V).
- P_{si} is the age-specific standard population for the ith age group from the U.S. standard age distribution (see Table X).
- P_s is the total U.S. standard population (all ages combined).

Table V. Estimated population by 5-year age groups, according to Hispanic origin and race, by sex: United States, 2022

[Populations are postcensal estimates based on the Blended Base produced by the U.S. Census Bureau in place of the April 1, 2020, decennial population count. The Blended Base consists of Vintage 2020 Population Estimates for April 1, 2020 (based on the April 1, 2010, decennial census), blended with the 2020 Demographic Analysis Estimates and the 2020 Census Edited File (see: https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/methods-statement-v2022.pdf); see Technical Notes in this report]

Hispanic origin and race and sex	All ages	Younger than 1	1–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39
Total[1]	333,287,557	3,683,113	14,855,240	20,009,195	20,889,839	21,635,792	22,705,779	22,193,164	23,308,136	22,267,949
Male	165,283,553	1,882,867	7,592,228	10,231,946	10,701,853	11,082,043	11,601,988	11,352,742	11,836,820	11,302,300
Female	168,004,004	1,800,246	7,263,012	9,777,249	10,187,986	10,553,749	11,103,791	10,840,422	11,471,316	10,965,649
Hispanic[2]	63,664,346	998,052	3,914,409	5,138,033	5,425,312	5,448,278	5,348,842	4,890,520	4,817,130	4,607,877
Male	32,276,938	508,033	1,993,334	2,617,863	2,772,306	2,789,251	2,736,364	2,515,190	2,511,946	2,428,189
Female	31,387,408	490,019	1,921,075	2,520,170	2,653,006	2,659,027	2,612,478	2,375,330	2,305,184	2,179,688
Non-Hispanic, single race[3]:										
American Indian and Alaska Native	2,420,972	25,196	106,731	156,510	170,252	176,542	186,474	181,475	188,952	163,408
Male	1,197,400	12,864	54,375	79,942	86,677	89,741	94,788	92,462	96,188	82,110
Female	1,223,572	12,332	52,356	76,568	83,575	86,801	91,686	89,013	92,764	81,298
Asian	20,276,025	203,944	848,949	1,174,461	1,119,771	1,158,864	1,308,563	1,480,440	1,730,538	1,719,043
Male	9,769,094	105,289	437,706	605,005	573,927	586,389	659,228	740,389	848,290	833,341
Female	10,506,931	98,655	411,243	569,456	545,844	572,475	649,335	740,051	882,248	885,702
Black	42,070,471	543,753	2,113,785	2,748,687	2,887,521	2,930,236	3,160,578	3,191,592	3,369,433	2,887,606
Male	20,226,190	275,945	1,070,946	1,391,158	1,467,625	1,484,723	1,592,836	1,610,536	1,673,804	1,407,022
Female	21,844,281	267,808	1,042,839	1,357,529	1,419,896	1,445,513	1,567,742	1,581,056	1,695,629	1,480,584
Native Hawaiian or Other Pacific Islander	635,928	8,088	33,904	45,585	43,315	44,194	44,988	46,477	53,541	52,129
Male	321,585	4,200	17,524	23,316	22,065	22,497	23,187	23,768	27,604	26,845
Female	314,343	3,888	16,380	22,269	21,250	21,697	21,801	22,709	25,937	25,284
White	196,225,966	1,707,800	7,061,704	9,751,038	10,285,750	11,027,468	11,892,505	11,764,358	12,622,234	12,427,017
Male	97,521,380	876,488	3,622,083	5,005,982	5,289,325	5,676,512	6,108,424	6,048,016	6,421,573	6,328,580
Female	98,704,586	831,312	3,439,621	4,745,056	4,996,425	5,350,956	5,784,081	5,716,342	6,200,661	6,098,437

Hispanic origin and race and sex	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85 and older
Total[1]	21,427,416	19,624,098	20,807,547	20,967,014	21,118,423	18,631,422	15,157,017	10,861,000	6,659,545	6,485,868
Male	10,817,889	9,844,989	10,434,641	10,373,923	10,297,980	8,873,901	7,036,771	4,909,686	2,825,159	2,283,827
Female	10,609,527	9,779,109	10,372,906	10,593,091	10,820,443	9,757,521	8,120,246	5,951,314	3,834,386	4,202,041
Hispanic[2]	4,459,023	4,033,387	3,640,210	3,121,175	2,536,929	1,908,475	1,360,595	908,000	567,743	540,356
Male	2,324,642	2,065,385	1,858,866	1,573,504	1,249,624	903,330	619,254	392,326	229,454	188,077
Female	2,134,381	1,968,002	1,781,344	1,547,671	1,287,305	1,005,145	741,341	515,674	338,289	352,279
Non-Hispanic, single race[3]:										
American Indian and Alaska Native	149,913	136,358	140,876	146,519	146,327	121,996	92,365	61,210	36,815	33,053
Male	74,984	67,726	69,755	70,993	69,235	56,425	42,606	27,925	16,125	12,479
Female	74,929	68,632	71,121	75,526	77,092	65,571	49,759	33,285	20,690	20,574
Asian	1,582,521	1,471,886	1,373,321	1,184,527	1,064,341	937,009	755,804	502,180	325,064	334,799
Male	751,154	696,931	649,955	555,946	490,376	419,966	330,334	220,628	140,068	124,172
Female	831,367	774,955	723,366	628,581	573,965	517,043	425,470	281,552	184,996	210,627
Black	2,743,559	2,471,784	2,568,807	2,557,040	2,440,524	1,995,366	1,474,542	920,305	556,510	508,843
Male	1,315,879	1,171,411	1,217,767	1,197,900	1,124,054	882,604	619,103	368,642	204,186	150,049
Female	1,427,680	1,300,373	1,351,040	1,359,140	1,316,470	1,112,762	855,439	551,663	352,324	358,794
Native Hawaiian or Other Pacific Islander	47,053	39,300	37,172	35,371	32,492	25,874	19,635	12,708	7,251	6,851
Male	24,243	20,122	18,798	17,501	16,103	12,474	9,316	6,055	3,256	2,711
Female	22,810	19,178	18,374	17,870	16,389	13,400	10,319	6,653	3,995	4,140
White	12,088,581	11,183,313	12,781,822	13,688,221	14,675,149	13,461,676	11,320,516	8,366,001	5,111,684	5,009,129
Male	6,157,793	5,687,353	6,493,318	6,847,295	7,242,868	6,513,923	5,354,091	3,853,134	2,208,276	1,786,346
Female	5,930,788	5,495,960	6,288,504	6,840,926	7,432,281	6,947,753	5,966,425	4,512,867	2,903,408	3,222,783

[1]Includes origin not stated, origin not classifiable, and two or more races reported; see Technical Notes.
[2]Includes people of Hispanic origin of any race; see Technical Notes.
[3]Only one race was reported; see Technical Notes.

SOURCE: National Center for Health Statistics, estimates as of July 1, 2022, U.S. resident population by age, sex, race, and Hispanic origin prepared by U.S. Census Bureau, 2023.

Table VI. Estimated population and standard error for specified Hispanic origin populations, by 10-year age group and sex: United States, 2022

[Population estimates for Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and Other and unknown Hispanic populations are based on the 2022 1-year American Community Survey adjusted to postcensal July 1, 2022, resident population control totals; see Technical Notes in this report. Population estimates for Hispanic total (Table V) are based on the Blended Base produced by the U.S. Census Bureau in place of the April 1, 2020, decennial population count. The Blended Base consists of Vintage 2020 Population Estimates for April 1, 2020 (based on April 1, 2010, decennial census), blended with the 2020 Demographic Analysis Estimates and the 2020 Census Edited File (see: https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/methods-statement-v2022.pdf). Population estimates by specified Hispanic origin in this table may not add to population estimates for total Hispanic in Table V. Standard errors are shown in parentheses below each population estimate]

Hispanic origin and sex	All ages	Younger than 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and older
Central American	6,531,260	109,590	452,980	1,085,720	1,109,940	1,078,815	1,058,105	762,780	501,485	249,525	93,210	29,110
	(31,775)	(4,115)	(9,267)	(13,765)	(13,256)	(13,013)	(12,523)	(10,092)	(8,193)	(5,538)	(3,484)	(1,910)
Male	3,357,795	53,750	230,155	550,585	583,135	563,415	581,220	403,605	245,650	105,585	32,030	8,665
	(23,887)	(3,097)	(7,245)	(10,304)	(10,109)	(9,557)	(9,608)	(7,554)	(6,397)	(3,638)	(2,008)	(1,109)
Female	3,173,465	55,840	222,825	535,135	526,805	515,400	476,885	359,175	255,835	143,940	61,180	20,445
	(20,954)	(2,710)	(5,779)	(9,127)	(8,576)	(8,832)	(8,031)	(6,692)	(5,118)	(4,176)	(2,847)	(1,555)
Cuban.	2,435,605	23,210	116,405	263,375	269,035	348,275	334,445	336,310	333,875	208,640	134,335	67,700
	(18,587)	(2,047)	(4,429)	(6,633)	(6,404)	(7,036)	(7,748)	(6,317)	(6,542)	(4,569)	(4,056)	(2,664)
Male	1,235,770	11,180	59,330	134,835	139,370	177,675	181,780	183,165	167,530	99,705	57,845	23,355
	(13,439)	(1,460)	(3,136)	(4,870)	(4,474)	(4,993)	(6,020)	(4,750)	(4,648)	(3,200)	(2,607)	(1,587)
Female	1,199,835	12,030	57,075	128,540	129,665	170,600	152,665	153,145	166,345	108,935	76,490	44,345
	(12,840)	(1,434)	(3,128)	(4,504)	(4,581)	(4,957)	(4,877)	(4,164)	(4,604)	(3,261)	(3,107)	(2,140)
Dominican	2,396,790	40,765	155,725	376,125	364,045	384,050	337,820	287,230	227,120	143,690	62,365	17,855
	(20,334)	(3,101)	(5,161)	(8,589)	(7,777)	(7,998)	(8,288)	(6,937)	(5,676)	(4,140)	(3,232)	(1,543)
Male	1,136,300	24,250	80,380	187,345	181,860	190,725	161,590	126,175	96,295	59,490	23,120	5,070
	(14,649)	(2,668)	(3,724)	(6,048)	(5,862)	(5,866)	(6,073)	(4,916)	(3,854)	(2,713)	(2,095)	(786)
Female	1,260,490	16,515	75,345	188,780	182,185	193,325	176,230	161,055	130,825	84,200	39,245	12,785
	(14,102)	(1,581)	(3,573)	(6,099)	(5,111)	(5,436)	(5,641)	(4,894)	(4,167)	(3,127)	(2,461)	(1,327)
Mexican	37,414,765	548,590	2,332,280	6,594,975	6,793,825	5,771,985	5,271,250	4,427,185	3,019,135	1,705,740	717,045	232,755
	(61,570)	(9,390)	(14,675)	(27,302)	(22,133)	(23,469)	(26,288)	(20,573)	(18,188)	(12,920)	(8,271)	(4,561)
Male	19,115,315	276,585	1,197,190	3,368,140	3,474,675	2,995,475	2,759,260	2,287,910	1,533,660	825,580	310,560	86,280
	(44,026)	(7,426)	(10,649)	(18,691)	(15,842)	(16,741)	(19,010)	(15,385)	(12,934)	(9,336)	(5,352)	(2,824)
Female	18,299,450	272,005	1,135,090	3,226,835	3,319,150	2,776,510	2,511,990	2,139,275	1,485,475	880,160	406,485	146,475
	(43,041)	(5,748)	(10,096)	(19,901)	(15,456)	(16,448)	(18,157)	(13,659)	(12,787)	(8,931)	(6,307)	(3,582)
Puerto Rican	5,905,195	86,425	365,355	963,285	899,665	869,375	816,790	698,620	595,595	365,545	182,355	62,185
	(29,801)	(3,702)	(8,359)	(13,269)	(10,728)	(11,178)	(11,153)	(10,170)	(8,975)	(6,955)	(4,693)	(3,106)
Male	2,946,795	40,930	186,715	498,455	457,875	450,145	416,345	344,945	289,675	166,420	74,770	20,520
	(21,301)	(2,638)	(5,790)	(9,436)	(7,856)	(8,040)	(8,468)	(7,293)	(6,256)	(4,746)	(2,877)	(1,730)
Female	2,958,400	45,495	178,640	464,830	441,790	419,230	400,445	353,675	305,920	199,125	107,585	41,665
	(20,841)	(2,596)	(6,028)	(9,328)	(7,306)	(7,766)	(7,258)	(7,088)	(6,435)	(5,084)	(3,708)	(2,580)
South American	4,667,000	57,130	235,190	608,950	622,645	694,520	739,705	680,520	532,600	306,080	139,300	50,360
	(26,081)	(3,043)	(6,088)	(10,451)	(9,691)	(10,197)	(10,739)	(9,206)	(8,125)	(6,058)	(4,172)	(2,574)
Male	2,260,020	28,250	119,490	307,835	315,780	343,160	366,090	324,620	254,505	129,210	53,755	17,325
	(18,509)	(2,350)	(4,317)	(7,363)	(7,133)	(6,889)	(7,853)	(6,912)	(5,731)	(3,793)	(2,640)	(1,495)
Female	2,406,980	28,880	115,700	301,115	306,865	351,360	373,615	355,900	278,095	176,870	85,545	33,035
	(18,376)	(1,933)	(4,292)	(7,417)	(6,560)	(7,518)	(7,325)	(6,081)	(5,760)	(4,723)	(3,230)	(2,096)
Other and unknown Hispanic	4,203,110	65,665	261,930	667,290	712,265	567,980	537,945	456,250	432,390	299,220	147,800	54,375
	(24,351)	(3,623)	(6,241)	(10,767)	(9,883)	(8,325)	(9,080)	(8,292)	(7,110)	(6,026)	(3,870)	(2,226)
Male	2,128,410	30,360	128,860	351,305	365,910	302,495	282,445	233,045	212,615	137,140	63,580	20,655
	(17,622)	(2,404)	(4,638)	(8,294)	(7,013)	(6,237)	(6,638)	(5,777)	(5,030)	(3,980)	(2,460)	(1,320)
Female	2,074,700	35,305	133,070	315,985	346,355	265,485	255,500	223,205	219,775	162,080	84,220	33,720
	(16,807)	(2,710)	(4,176)	(6,866)	(6,964)	(5,514)	(6,196)	(5,949)	(5,025)	(4,525)	(2,988)	(1,792)

SOURCE: Population estimates are based on unpublished tabulations prepared by the U.S. Census Bureau, 2021 1-year American Community Survey.

Table VII. Estimated population and standard errors for age 15 and older, by marital status, 10-year age group, and sex: United States, 2022

[Population estimates are based on the 2022 1-year American Community Survey Public Use Microdata Sample adjusted to postcensal July 1, 2022, resident population control totals; see Technical Notes in this report. Standard errors are shown in parentheses below each population estimate]

Marital status and sex	Age group							
	15 and older	15–24	25–34	35–44	45–54	55–64	65–74	75 and older
All races	273,938,835	44,231,700	45,233,265	44,047,640	40,476,440	42,127,470	33,898,080	23,924,240
	(145,489)	(41,610)	(60,819)	(68,694)	(53,955)	(60,584)	(50,127)	(43,858)
Never married	94,079,880	41,734,595	25,488,645	11,657,095	6,353,260	5,015,260	2,681,900	1,149,125
	(79,265)	(37,472)	(40,949)	(40,067)	(26,104)	(23,604)	(15,766)	(10,470)
Ever married	179,858,955	2,497,105	19,744,620	32,390,545	34,123,180	37,112,210	31,216,180	22,775,115
	(122,000)	(18,090)	(44,969)	(55,799)	(47,220)	(55,797)	(47,584)	(42,590)
Married	136,077,390	2,371,865	18,014,855	27,821,515	27,202,065	27,505,950	21,448,070	11,713,070
	(100,499)	(17,537)	(42,269)	(49,576)	(37,028)	(45,069)	(36,272)	(28,812)
Widowed	15,101,235	14,655	83,925	263,660	677,595	1,986,680	4,019,820	8,054,900
	(37,495)	(1,558)	(3,597)	(6,008)	(10,108)	(13,896)	(19,499)	(26,056)
Divorced	28,680,330	110,585	1,645,840	4,305,370	6,243,520	7,619,580	5,748,290	3,007,145
	(58,122)	(4,158)	(14,919)	(24,894)	(27,505)	(29,816)	(23,840)	(17,458)
All races, male	134,830,000	22,656,100	23,030,350	22,262,360	20,300,590	20,655,950	15,948,825	9,975,825
	(100,600)	(29,177)	(43,186)	(49,134)	(36,815)	(42,486)	(33,298)	(26,845)
Never married	50,164,325	21,607,010	14,061,740	6,515,830	3,465,545	2,732,305	1,332,045	449,850
	(57,380)	(26,421)	(28,468)	(30,973)	(18,651)	(17,899)	(10,851)	(6,214)
Ever married	84,665,675	1,049,090	8,968,610	15,746,530	16,835,045	17,923,645	14,616,780	9,525,975
	(82,631)	(12,378)	(32,474)	(38,143)	(31,741)	(38,531)	(31,481)	(26,116)
Married	69,028,525	997,910	8,250,770	13,793,175	13,868,535	14,032,300	11,297,270	6,788,565
	(71,216)	(12,065)	(30,701)	(34,519)	(25,802)	(32,183)	(25,695)	(20,744)
Widowed	3,495,640	6,460	23,880	79,440	189,355	523,190	956,695	1,716,620
	(18,517)	(1,074)	(1,753)	(3,687)	(5,189)	(7,783)	(9,101)	(12,440)
Divorced	12,141,510	44,720	693,960	1,873,915	2,777,155	3,368,155	2,362,815	1,020,790
	(37,593)	(2,547)	(10,438)	(15,804)	(17,743)	(19,706)	(15,746)	(9,846)
All races, female	139,108,835	21,575,600	22,202,915	21,785,280	20,175,850	21,471,520	17,949,255	13,948,415
	(105,104)	(29,666)	(42,825)	(48,007)	(39,444)	(43,190)	(37,470)	(34,682)
Never married	43,915,555	20,127,585	11,426,905	5,141,265	2,887,715	2,282,955	1,349,855	699,275
	(54,686)	(26,571)	(29,434)	(25,417)	(18,264)	(15,387)	(11,437)	(8,427)
Ever married	95,193,280	1,448,015	10,776,010	16,644,015	17,288,135	19,188,565	16,599,400	13,249,140
	(89,757)	(13,193)	(31,107)	(40,727)	(34,961)	(40,356)	(35,681)	(33,643)
Married	67,048,865	1,373,955	9,764,085	14,028,340	13,333,530	13,473,650	10,150,800	4,924,505
	(70,911)	(12,727)	(29,054)	(35,584)	(26,558)	(31,551)	(25,601)	(19,996)
Widowed	11,605,595	8,195	60,045	184,220	488,240	1,463,490	3,063,125	6,338,280
	(32,603)	(1,128)	(3,141)	(4,744)	(8,674)	(11,512)	(17,244)	(22,895)
Divorced	16,538,820	65,865	951,880	2,431,455	3,466,365	4,251,425	3,385,475	1,986,355
	(44,328)	(3,286)	(10,659)	(19,233)	(21,017)	(22,375)	(17,900)	(14,416)

SOURCE: Population estimates are based on unpublished tabulations prepared by the U.S. Census Bureau, American Community Survey 2022, 1-Year.

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 and maternal 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.

Tables 3, 13, and 14—Rates for Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and Other Hispanic populations in Table 3, by marital status in Table 13, and by educational attainment in Table 14 are based on population estimates derived from 1-year ACS Public Use Microdata Sample

for 2022 and adjusted to resident population control totals (74). As a result, the rates are subject to sampling variability in the denominator as well as random variability in the numerator.

For crude and age-specific death rates (R), the SE is calculated as

$$SE(R) = R \cdot \sqrt{\frac{1}{D} + \left(\frac{SE(P)}{P}\right)^2} \qquad [9]$$

For age-adjusted death rates (R')

$$SE(R') = \sqrt{\sum_i \left\{ \left(\frac{P_{si}}{P_s}\right)^2 \cdot R_i^2 \left[\frac{1}{D_i} + \left(\frac{SE(P_i)}{P_i}\right)^2 \right] \right\}} \qquad [10]$$

where SE(P) in Formulas 9 and 10 represents the SEs of ACS population estimates. SEs of ACS population estimates used

Table VIII. Estimated population and standard error for ages 25–64, by educational attainment and sex: United States, 2022

[Population estimates are based on the 2022 1-year American Community Survey adjusted to postcensal July 1, 2022 resident population control totals; see Technical Notes in this report. Standard errors are shown in parentheses below each population estimate]

Education level and sex	Age group				
	25–64	25–34	35–44	45–54	55–64
Both sexes	171,884,815	45,233,255	44,047,660	40,476,435	42,127,465
	(140,652)	(78,088)	(74,115)	(65,531)	(62,432)
Less than high school diploma or GED.	16,768,325	3,288,105	4,334,660	4,486,665	4,658,895
	(47,116)	(22,135)	(26,188)	(22,744)	(22,953)
High school diploma or GED	42,722,365	10,971,690	9,867,025	9,770,810	12,112,840
	(70,867)	(39,128)	(35,721)	(33,592)	(32,966)
Some college or collegiate degree	112,394,125	30,973,460	29,845,975	26,218,960	25,355,730
	(111,986)	(63,850)	(59,424)	(51,465)	(47,793)
Male.	86,249,250	23,030,345	22,262,375	20,300,590	20,655,940
	(99,074)	(53,407)	(53,636)	(46,661)	(43,696)
Less than high school diploma or GED.	9,409,700	1,950,865	2,479,145	2,487,315	2,492,375
	(35,871)	(16,480)	(20,224)	(17,126)	(17,687)
High school diploma or GED	23,822,705	6,410,545	5,696,735	5,415,670	6,299,755
	(51,346)	(26,811)	(27,800)	(24,155)	(23,692)
Some college or collegiate degree	53,016,845	14,668,935	14,086,495	12,397,605	11,863,810
	(76,762)	(43,149)	(41,170)	(36,062)	(32,174)
Female	85,635,565	22,202,910	21,785,285	20,175,845	21,471,525
	(99,837)	(56,970)	(51,149)	(46,012)	(44,592)
Less than high school diploma or GED.	7,358,625	1,337,240	1,855,515	1,999,350	2,166,520
	(30,549)	(14,778)	(16,638)	(14,967)	(14,629)
High school diploma or GED	18,899,660	4,561,145	4,170,290	4,355,140	5,813,085
	(48,844)	(28,499)	(22,431)	(23,345)	(22,922)
Some college or collegiate degree	59,377,280	16,304,525	15,759,480	13,821,355	13,491,920
	(81,538)	(47,064)	(42,852)	(36,717)	(35,341)

SOURCE: Population estimates are based on unpublished tabulations prepared by the U.S. Census Bureau, American Community Survey, 2022 1-Year.

in this report are presented in Table VI by Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and Other Hispanic populations; in Table VII by marital status; and in Table VIII by educational attainment.

In Tables 3, 13, and 14, sampling variability in the population denominator had a substantial impact on the overall variability in the death rate. Therefore, the number of deaths in the numerator was not used as the sole suppression factor. RSEs for rates shown in Tables 3, 13, and 14 are derived from Formulas 9 and 10 by dividing the result of Formula 9 by the crude and age-specific rate, and the result of Formula 10 by the age-adjusted rate, and then multiplying by 100. Rates are replaced by asterisks if the calculated RSE is 23% or more.

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 and maternal mortality rates, the normal approximation performs well when the number of deaths is 100 or more. For age-adjusted rates, the criterion for use of the normal approximation is somewhat more complicated (78,79). Formula 11 is used to calculate 95% confidence limits for the death rate when the normal approximation is appropriate:

$$L(R) = R - 1.96 \, (SE(R)) \qquad [11]$$

and

$$L(R) = R - 1.96 \, (SE(R))$$

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 11 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 11 can also be used to calculate 95% confidence intervals for the number of deaths, age-adjusted death rates, IMRs, 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

$$z = \frac{R_1 - R_2}{\sqrt{SE(R_1)^2 + SE(R_2)^2}} \qquad [12]$$

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

Table IX. Estimated population for the United States, each state, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas, 2022

[Populations are postcensal estimates based on the Blended Base produced by the U.S. Census Bureau in place of the April 1, 2020, decennial population count. The Blended Base consists of Vintage 2020 Population Estimates for April 1, 2020 (based on April 1, 2010, decennial census), blended with the 2020 Demographic Analysis Estimates and the 2020 Census Edited File (see: https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/methods-statement-v2022.pdf)]

Area	Total	Area	Total
United States	333,287,557	New Jersey	9,261,699
Alabama	5,074,296	New Mexico	2,113,344
Alaska	733,583	New York	19,677,151
Arizona	7,359,197	North Carolina	10,698,973
Arkansas	3,045,637	North Dakota	779,261
California	39,029,342	Ohio	11,756,058
Colorado	5,839,926	Oklahoma	4,019,800
Connecticut	3,626,205	Oregon	4,240,137
Delaware	1,018,396	Pennsylvania	12,972,008
District of Columbia	671,803	Rhode Island	1,093,734
Florida	22,244,823	South Carolina	5,282,634
Georgia	10,912,876	South Dakota	909,824
Hawaii	1,440,196	Tennessee	7,051,339
Idaho	1,939,033	Texas	30,029,572
Illinois	12,582,032	Utah	3,380,800
Indiana	6,833,037	Vermont	647,064
Iowa	3,200,517	Virginia	8,683,619
Kansas	2,937,150	Washington	7,785,786
Kentucky	4,512,310	West Virginia	1,775,156
Louisiana	4,590,241	Wisconsin	5,892,539
Maine	1,385,340	Wyoming	581,381
Maryland	6,164,660	Puerto Rico	3,221,789
Massachusetts	6,981,974	U.S. Virgin Islands	105,413
Michigan	10,034,113	Guam	169,086
Minnesota	5,717,184	American Samoa	45,443
Mississippi	2,940,057	Northern Marianas	51,475
Missouri	6,177,957		
Montana	1,122,867		
Nebraska	1,967,923		
Nevada	3,177,772		
New Hampshire	1,395,231		

SOURCES: U.S. Census Bureau. 2022 population estimates (available from: https://www2.census.gov/programs-surveys/popest/datasets/2020-2022/state/asrh/sc-est2022-alldata6.csv), Puerto Rico 2022 population estimates (available from: https://www2.census.gov/programs-surveys/popest/tables/2020-2022/puerto-rico/asrh/prc-est2022-syasex.xlsx), and international data base, 2022 (available from: https://www.census.gov/data-tools/demo/idb/#/country?YR_ANIM=2022&FIPS_SINGLE=**&dashPages=DASH&COUNTRY_YEAR=2022).

difference is not statistically significant. Formula 12 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 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 12 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 (76,78). 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 (such as 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 zero and one. 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:

$$L(D) = GAMMAINV(0.025, D, 1)$$
and
$$U(D) = GAMMAINV(0.975, D + 1, 1)$$

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 19).

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

$$L(D) = L \cdot D \text{ and } U(D) = U \cdot D \qquad [13]$$
and
$$L(R) = L \cdot R \text{ and } U(R) = U \cdot R \qquad [14]$$

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 XI. For example, suppose that the death rate for American Indian and Alaska Native non-Hispanic females ages 1–4 is 39.5 per 100,000 and based on 50 deaths. Applying Formula 14, values for L and U from Table XI for 50 deaths are multiplied by the death rate, 39.5, such that

$$L(R) = L(39.5) = 0.742219 \cdot 39.5 = 29.3$$
and
$$U(R) = U(39.5) = 1.318375 \cdot 39.5 = 52.1$$

These confidence limits indicate that the chances are 95 in 100 that the actual death rate for American Indian and Alaska Native non-Hispanic females ages 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 and maternal mortality rates, and rates that are subject to sampling variability in the denominator are somewhat more complicated (78).

Refer to the last published version of the Mortality Technical Appendix for more details: https://www.cdc.gov/nchs/data/statab/techap95.pdf (79).

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).

Table X. U.S. standard population

Age group	Population
All ages	274,633,642
Younger than 1	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 older	4,259,173

SOURCE: Anderson RN, Rosenberg HM. Age standardization of death rates: Implementation of the year 2000 standard. National Vital Statistics Reports; vol 47 no 3. Hyattsville, MD: National Center for Health Statistics. 1998.

Positive tests denote statistical significance at the 0.05 level. For example, suppose that American Indian and Alaska Native non-Hispanic females ages 1–4 have a death rate (R_1) of 39.5 based on 50 deaths, and Asian females ages 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 14 would be

$$L(R_1) = L(39.5) = 0.742219 \cdot 39.5 = 29.3$$
and
$$U(R_1) = U(39.5) = 1.318375 \cdot 39.5 = 52.1$$

$$L(R_2) = L(20.1) = 0.799871 \cdot 20.1 = 16.1$$
and
$$U(R_2) = U(20.1) = 1.234992 \cdot 20.1 = 24.8$$

Because $R_1 > R_2$ and L(R_1) > U(R_2), it can be concluded that the difference between the death rates for American Indian and Alaska Native females ages 1–4 and Asian females of the same age is statistically significant at the 0.05 level. That is, accounting for random variability, Asian females ages 1–4 have a death rate significantly lower than that for American Indian and Alaska Native 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 (80). Caution should be observed 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 (80), $E(X) = yz$ 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,

$$D \sim \Gamma(D,1) \qquad [15]$$

Table XI. Lower and upper 95% confidence limit factors for the number of deaths and death rate when the 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.	0.025318	5.571643	51.	0.744566	1.314815
2.	0.121105	3.612344	52.	0.746848	1.311367
3.	0.206224	2.922424	53.	0.749069	1.308025
4.	0.272466	2.560397	54.	0.751231	1.304783
5.	0.324697	2.333666	55.	0.753337	1.301637
6.	0.366982	2.176579	56.	0.755389	1.298583
7.	0.402052	2.060382	57.	0.757390	1.295616
8.	0.431729	1.970399	58.	0.759342	1.292732
9.	0.457264	1.898311	59.	0.761246	1.289927
10.	0.479539	1.839036	60.	0.763105	1.287198
11.	0.499196	1.789276	61.	0.764921	1.284542
12.	0.516715	1.746799	62.	0.766694	1.281955
13.	0.532458	1.710030	63.	0.768427	1.279434
14.	0.546709	1.677830	64.	0.770122	1.276978
15.	0.559692	1.649348	65.	0.771779	1.274582
16.	0.571586	1.623937	66.	0.773400	1.272245
17.	0.582537	1.601097	67.	0.774986	1.269965
18.	0.592663	1.580431	68.	0.776539	1.267738
19.	0.602065	1.561624	69.	0.778060	1.265564
20.	0.610826	1.544419	70.	0.779549	1.263440
21.	0.619016	1.528606	71.	0.781008	1.261364
22.	0.626695	1.514012	72.	0.782438	1.259335
23.	0.633914	1.500491	73.	0.783840	1.257350
24.	0.640719	1.487921	74.	0.785215	1.255408
25.	0.647147	1.476197	75.	0.786563	1.253509
26.	0.653233	1.465232	76.	0.787886	1.251649
27.	0.659006	1.454947	77.	0.789184	1.249828
28.	0.664493	1.445278	78.	0.790459	1.248045
29.	0.669716	1.436167	79.	0.791709	1.246298
30.	0.674696	1.427562	80.	0.792938	1.244587
31.	0.679451	1.419420	81.	0.794144	1.242909
32.	0.683999	1.411702	82.	0.795330	1.241264
33.	0.688354	1.404372	83.	0.796494	1.239650
34.	0.692529	1.397400	84.	0.797639	1.238068
35.	0.696537	1.390758	85.	0.798764	1.236515
36.	0.700388	1.384422	86.	0.799871	1.234992
37.	0.704092	1.378368	87.	0.800959	1.233496
38.	0.707660	1.372578	88.	0.802029	1.232028
39.	0.711098	1.367033	89.	0.803082	1.230586
40.	0.714415	1.361716	90.	0.804118	1.229170
41.	0.717617	1.356613	91.	0.805138	1.227778
42.	0.720712	1.351709	92.	0.806141	1.226411
43.	0.723705	1.346993	93.	0.807129	1.225068
44.	0.726602	1.342453	94.	0.808102	1.223747
45.	0.729407	1.338079	95.	0.809060	1.222448
46.	0.732126	1.333860	96.	0.810003	1.221171
47.	0.734762	1.329788	97.	0.810933	1.219915
48.	0.737321	1.325855	98.	0.811848	1.218680
49.	0.739806	1.322053	99.	0.812751	1.217464
50.	0.742219	1.318375			

From Equation 13, 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,

$$R \sim \Gamma(D, P^{-1}) \qquad [16]$$

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 14 in its simplified form gives:

$$R/P^{-1} = D \sim \Gamma(D,1) \qquad [17]$$

From Equation 15, 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 13 and 15, the inverse gamma distribution can be used to calculate upper and lower confidence limits. Lower and upper $100(1 - \alpha)$ percentage confidence limits for the number of deaths, L(D) and U(D), are estimated as

$$L(D) = \Gamma^{-1}{}_{(D,1)}(\alpha / 2) \text{ and } U(D) = \Gamma^{-1}{}_{(D+1,1)}(1 - \alpha / 2) \qquad [18]$$

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

$$L(R) = L(D)/P \text{ and } U(R) = U(D)/P \qquad [19]$$

For more detail regarding the derivation of the gamma method and its application to age-adjusted death rates and other mortality statistics, see References (14,77,81).

Availability of mortality data

Mortality data are available in publications, unpublished tables, and electronic products as described on the NCHS mortality website: 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: 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 people in the entire population.

Infant deaths—Deaths of infants younger than age 1 year.

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

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

For more NCHS NVSRs, visit:
https://www.cdc.gov/nchs/products/nvsr.htm.

Contents

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Suggested citation

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